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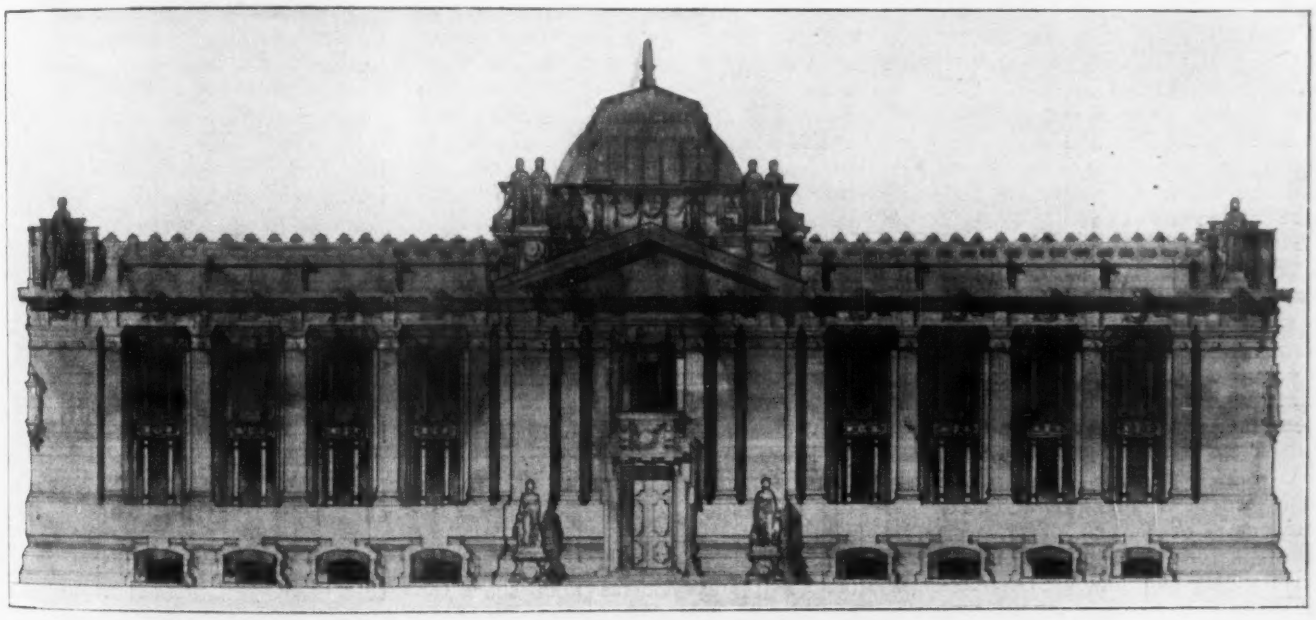
Detail of Design by Mr. S. Woods Hill, A.R.I.B.A.



Design for the Marylebone Municipal Buildings. (*See page* 95.)

By Mr. S. Woods Hill, A.R.I.B.A.

PRIZE DESIGNS AT THE R.I.B.A.

THE withholding of the Soane Medallion must always be a great disappointment to those immediately concerned and a matter of some regret to everyone interested in the future of architecture, as it is generally regarded as an indication that the work of the year is not up to the usual standard.

Although the Exhibition, taken as a whole, includes some very creditable work, yet no design submitted for the Soane appears to be of such outstanding merit as to suffer any grave injustice by the reservation of the prize.

We imagine, however, that the Council in taking this course were prompted not so much by a deliberate intention to express disappointment at the general level of the designs as by some little difficulty in choosing between the rival claims of the two designers, Mr. William Friskin and Mr. Piet de Joug, to each of whom has been awarded a certificate of Honourable Mention and a sum of 50*l*. This difficulty seems to be largely of the Council's own making. The subject set was a guildhall situated in a public park. Although it may perhaps be maintained that there is no reason why a guildhall, or any other building, should not be placed in a public park, yet it might be contended with equal, or even greater, force that there is no reason why it should. A guildhall is not one of those buildings that demand a site in a park. This is not just the most characteristic position imaginable. A guildhall suggests the civic centre, which is not usually a park.

But however this may be, the fact remains that the position of a building influences its lay-out and general treatment. The provision of a site not usually associated with the type of building desired is apt to confuse the student and to cause him to hesitate as to the treatment to be adopted, and to wonder how far it is permissible to vary the characteristic arrangements of any building in order to take full advantage of an uncharacteristic site. Competitors may well have thought that it was not quite clear whether the intention was simply to provide an unrestricted island site on which the building could develop its natural and characteristic form, and be given proper setting and approaches, or whether the park site was of the essence of the conditions—given with the deliberate intention of provoking those modifications of convenience and of accepted arrangements which would be necessarily entailed if full justice was to be done to the opportunity.

Be this as it may, the result is that most of the competitors show but little appreciation of the opportunity, and produce designs which might equally well have been placed in any open island site in the heart of a city. The principal

exception to this general rule is the design by Mr. William Friskin, which, taking the park site seriously, and making some definite attempt to show the influence of such a site and surroundings, and to solve the peculiar problem involved, creates, in so doing, a problem for the judges, which they, for their part, have attempted to solve in the same spirit of compromise as is displayed in Mr. Friskin's design.

The scheme by Mr. Piet de Joug is more compact, better arranged for the circulation of the public at receptions, more "practical," worked out better, perhaps, and, if there is anything to choose between them on this score, it may possibly show more technical accomplishment; but in its general lay-out, massing and grouping, and scale of feature it makes no special affort to take advantage of the character of its site or to express the influence of its environment. It is not altogether a solution of the exact problem involved. On the other hand, the design by Mr. Friskin does make a definite attempt to show the modifications of arrangements and of general lay-out suggested by the important fact that the building stands in a park. The idea may not be so well worked out in some respects—the junction of the circular hall with the main building, for instance, is not altogether happy—but it seems to be a more correct idea, and this is the first and most important factor in a competition of this description, and one which the judges are bound to take into consideration.

The fact that Mr. Friskin's design is less convenient and less compact is balanced by the fact that it is well spread out—a virtue on a park site, compactness being more appropriate to a compact or confined site. If this quality is essential to a guildhall the suggestion naturally presents itself that a park site is not. Indeed, we seem driven to the conclusion that what is a virtue in a park building is a vice in a guildhall, and that the problem is one which, if it is capable of satisfactory solution at all, is certainly most subtle and difficult, a refinement of expression needing a master hand; hardly suitable, therefore, as a subject for the Soane Medallion.

If the Council in stating the conditions of the programme attached any definite meaning to the site in a park and intended it to be a special problem, then we think Mr. Friskin's design would have won as being the best design which makes any serious attempt to solve it.

The fact that the Council have compromised between Mr. Friskin and Mr. Piet de Joug suggests that they attached no special meaning to the word and did not realise the significance or the possibilities of their own programme till they saw the different ways in which it could be interpreted by the students, when they found themselves in the position of not being able to award the prize to either one of the two best designs without injustice to the other.

The whole incident is unsatisfactory, and suggests that the programmes for these competitions are perhaps drawn up in too casual a manner.

Although there seems little doubt that the money prize has been divided between the two most meritorious designs, the reasons that prompted the selection of the other Honourable Mentions are not quite so obvious. Mr. Bertram Lisle has a good practical scheme, more pleasing perhaps than that by Mr. C. A. Harding, but both of them seem to be somewhat lacking in character. This perhaps is due to the fact that they have not made a special feature of the hall.

Where, as in this case, the programme consists of one principal hall round which the lesser ones are grouped the most characteristic effects can be obtained by frankly and clearly expressing this arrangement on the elevations. The hall itself provides the dominant feature. Where, however, as, say, in the Palais de Justice at Brussels, the scheme consists of several halls or courts of more or less equal importance, they can be grouped together in accordance with their relative functions, and the expression of the whole can be gathered up by one central dominant feature. This method of expression, being more characteristic of large and elaborate schemes, hardly seems suitable to such a simple subject as this. From this point of view most of the other designs are superior. "Fraternity," "Sign of the Black Fish," "Dragon," "ΟΥ ΤΟΠΟΣ," "Guild," and "Vitæ" are all designs which, whatever their defects, show a simpler and more straightforward solution of the problem. "Experientia Docet" is a design in which much individual character and feeling appears to be wasted on an impossible idea. If this design, more than any other submitted, suggests that ability without right principles only runs to waste, the thought is immediately followed by the reflection that the responsibility for wasted energies lies on those who are in a position to direct and control our system of education.

The value of a sound training is aptly illustrated by the design of Mr. Louis de Soissons, which carries off the Tite Prize. We consider that this design for the covered courtyard of an exchange attains to a higher standard of technical excellence than any other in the Exhibition. It may or may not show the greatest natural gift, but, taking it all round, whether as design or as draughtsmanship, we are inclined to think it the finest achievement.

An Honourable Mention goes to Mr. T. H. Chalkley for a well-worked-out circular plan. "Gregalah" has some interesting coloured drawings. "Dum Spiro Spero's" design is delicately rendered, and "Black Cat" submits a creditable scheme; but none of them have a chance against such a mature and accomplished design as that by Mr. De Soissons.

It must have been no easy task to select the winner of the Pugin Studentship. The prize goes to Mr. James Macgregor for good and careful drawings and sketches. Honourable Mentions are awarded to Mr. C. P. Anderson, Mr. J. R. Leatheart, Mr. R. Norman Mackellar, and Mr. W. J. P. Jones, all of whom submit excellent work. It is interesting to note how the brush is superseding the pen as a medium for rendering Gothic work. Such drawings as the studies of Durham Cathedral by Mr. Mackellar show that the special style and character of Gothic need not suffer in the process.

The Silver Medal and ten guineas are awarded to an excellent set of coloured drawings of Compton Wynyates by Mr. A. E. Maxwell. These are most carefully and successfully carried out, and, with the accompanying notes, amount to a complete monograph of the building.

An Honourable Mention goes to Mr. W. M. Keesey for a straightforward set of drawings of San Spirito, Florence, finished in ink and slightly tinted; and another to Mr. A. B. Allen for a complete and interesting study of the octagonal lantern of Ely Cathedral. "Sphinx" submits tinted drawings of the entrance front of the Male Prison at Cork.

The Owen Jones Prize is won by Mr. N. H. Leaver with a set of drawings which show considerable power for the realistic representation of examples of coloured decoration. We cannot help wondering, however, whether the careful, exact, and forcible rendering of each minute tissue of a fragment of antique mosaic is exactly the best form of study to improve our colour sense or to teach one the principles of colour decoration. Mr. Mason, the other competitor, has some extremely good studies of heads from tempera wall decorations by Raphael.

The Grissell Prize for construction is awarded to Mr. T. Braddock for a well-worked-out scheme on somewhat usual lines, while "Blanc Mange" submits a more novel and up-to-date suggestion into which the æsthetic element is introduced in an interesting and suggestive manner.

The Cates Prize, being given for a miscellaneous collection of "testimonies of study," must also be rather a difficult one to award. Mr. J. B. F. Cowper wins it with some excellent drawings.

The general impression that we carry away from this Exhibition is that the supply of energy, enthusiasm, and ability in those who will carry on the traditions of architecture in the future is unfailing, but that these qualities do not get a fair chance owing to the lack of a thorough and systematic training in the first principles of architecture. Progress in this direction is, however, apparent, and, though slow, may perhaps on that account be all the more sure.

NOTES.

New Zealand Parliament Buildings.

WE are glad to see that the recent competition for new Parliament Buildings in New Zealand has excited much local interest in architecture, and that our contemporary, *Progress: The Scientific New Zealander*, has thought the occasion of sufficient importance to warrant the publication of a selection of the designs. In an appreciative leading article it points out the necessity of obtaining the highest skill available, but does not appear to realise that the New Zealand Government, by limiting the competition to local architects, hardly went the best way to work to secure this result. Referring to some dissatisfaction with the interpretation of the conditions and with the method of assessing, our contemporary asks whether it would not have been much better to have sent the whole of the plans away to England to be judged by a member nominated by the R.I.B.A., and adds,

"There could have been no question then of any but fair treatment." Considering the nature and importance of the scheme, we think the New Zealanders would have been better advised to have done as the Manitoba Government proposes to do and throw the competition open to the whole of the Empire, in which case the arrangements for judging the designs would no doubt have been placed on a similar footing.

Colour as Applied to Decoration. LAST Monday's papers at the Institute provided material for useful discussion. It is good for the arts of architecture and painting to find their representatives on the same platform adumbrating principles which are of equal importance to either art. The opinions of Sir Alfred East and Mr. Edgar Wood were scarcely ever at issue. Both architect and painter recognised the disadvantages which the dominating influence of the easel type of picture has on the outlook of a painter when he has to face a subject suitable for a mural painting. Sir Alfred East expressed himself entirely in sympathy with the architectural view that decoration should assist, rather than diminish or conceal, the structural qualities of a building. And he evolved interesting theories with regard to the influence of special forms in the appeal of colour, which were not wholly without a significance made prominent by the Post-Impressionists. His references to the decorative qualities of Japanese painting and the means by which they are attained—the relation of colour weight to colour area, and so on—were particularly illuminating, and worth the consideration of all decorative artists, whether painters or architects. His allusion also to the difficulties with which the painter may have to contend when the subject for a decorative painting, not susceptible of decorative treatment, is chosen not by the architect, but by some outside authority, is certainly worth attention. Mr. Edgar Wood admirably presented the architects' point of view, and, while expressing a difficulty in finding words to make explicit impressions which in their essence "defy language," as he said, he nevertheless managed to convey his views in phrases which justified the medium of language in subtle matters of interpretation. His appreciation, for instance, of the colour qualities of St. Mark's at Venice was one of the happiest justifications of the use of colour for its own sake that we have ever heard.

The Royal Academy Lectures on Sculpture. THE first Royal Academy lecture on Sculpture this year was delivered on Monday by Professor W. R. Colton, A.R.A., the subject of the course being "Ideas and Ethics of Sculpture." The first lecture covered much of the ground of Professor Colton's recent Carpenters' Hall lecture, the first part being directed to a condemnation of the tendency to let ornament run riot in our public buildings, especially where, as in the "Keystone treatment," construction is sacrificed to ornament. The lecturer made some pertinent criticisms also on the Post-Impressionist sculpture fashionable in some places, but the best part of the lecture was in reference to our public monuments. Generally speaking, he said, England was a country of great intentions which were rarely carried out. Our bridges were left without ornamentation, and the art of sculpture was neglected by the public authorities. Foreign capitals were greatly superior to our own from the artistic point of view, and in this connexion the lecturer instanced the fine decorative approach to the Pont Alexandre III. in Paris. It was to be hoped that when the new St. Paul's Bridge came to be constructed the authorities would rise to the occasion. Our fault was that as a nation we were too utilitarian. We should be quite capable of putting kitchens inside our statues; anything to make them pay. The English grudged money for objects that appealed to the decorative sense alone. They failed to realise that miserable surroundings made miserable human beings. The few decorative objects we had in our thoroughfares were neglected and allowed to become coated with soot and sulphuric acid. As a nation we had become drab-grey, and all through the continual outcry in favour of utility.

Wood Engraving. THE City and Guilds of London Institute Report for Session 1910-1911 on the City and Guilds South London Technical Art School, in commenting on the fact that at one time the Institute's School included in its work a successful class in wood engraving, "when that art provided the only means of illustrating books and periodicals in the text," tells how the art of wood engraving was gradually superseded by the discovery and perfection of mechanical processes by which artists' drawings could be reproduced in the form of blocks, and used in much the same way as wood engravings for illustrations capable of being printed along with ordinary type. As the Report says:—

"The wood engraver, whose art consisted in interpreting artist's drawings and paintings on wood so that they might be printed in large numbers, was superseded by mechanical processes in which photography played the more important part."

The truth of this is, unfortunately, only too well known, and all artists and art workers must regret it, even while they are compelled to admit the inevitableness, once the mechanical process was started, of a loss which has rendered a fine craft more or less obsolete. We are glad to note from the Report that a very successful and useful work is being carried on in the School.

Hampton Court Palace. MUCH satisfaction will be felt at the action of the Office of Works in carrying out a thorough scheme for the proper protection of Hampton Court Palace against fire. Probably no building of the magnitude and character of the Palace, used as this building is, can ever be altogether safe against fire; but so much can be done in these days of high-pressure water supply, electric fire alarms, telephonic communication, and efficient fire brigades, to render our national treasure-houses more or less proof against fire, that everything should be done on the most approved lines and regardless of cost. We welcome the action of the Office of Works and hope that other public buildings will not be forgotten.

The Carpenters' Hall Lectures. WE should like to call attention to another course of free lectures on "The Arts Connected with Building," which has been arranged by the Worshipful Company of Carpenters in their Hall in London-wall, the first of which was delivered on Wednesday. The course has nothing to do with the more popular, though none the less useful, Thursday series, beginning this year on February 15, but it is arranged with the idea of interesting and instructing craftsmen and art workers, though the range is not limited, as will be seen by a perusal of the subjects and a glance at the list of able lecturers. Such a course deserves to be supported, and we hope the efforts of the Company, who are doing such excellent work both in London-wall and in Great Titchfield-street, will be appreciated by good attendances.

The R.I.B.A. "At Home." THE "At Home" given by the President and Council of the Royal Institute of British Architects at the Institute Galleries on Wednesday was a well-attended and successful function. Beyond the opportunity afforded for social intercourse, the object of interest on this occasion was the collection of drawings submitted in competition for the Royal Institute Prizes and Studentships, which were seen to advantage in the galleries of the Institute. The collection as a whole loses some of its interest from the fact that the Council have not been able to award the Soane Medallion this year, but the drawings are sufficiently attractive to interest the guests for the whole of a very pleasant evening.

LARGS MEMORIAL.

The designs of Mr. J. S. Kay, of Glasgow, architect, have been accepted for the erection of a memorial, in the form of a round tower after the Scottish mode, upon the foreshore at Largs.

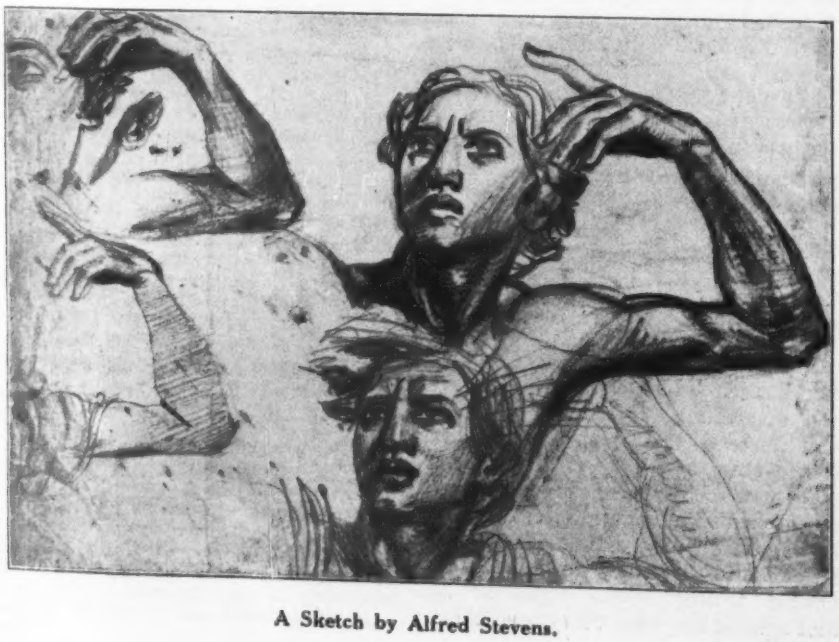
CHURCH BUILDING SOCIETY.

The Incorporated Church Building Society held its usual monthly meeting on the 18th inst. at the Society's House, 7, Dean's-yard, Westminster Abbey, S.W. Grants of money were made in aid of the following objects, viz.:—Building new churches at Barnfield, St. Paul,, Accrington, 100*l.*; Beckenham, St. Barnabas, Kent, 50*l.*; Colne, Holy Trinity, Lancs., 120*l.*; Goodmayes, All Saints, Barking, Essex, 100*l.*; Hollinwood, Emmanuel, Chadderton, 80*l.*; Hurst Green, St. John, Oxted, Surrey, 70*l.*; Kentish Town, St. Silas, Middlesex, 150*l.*; Watford, St. Michael and All Angels, Herts, 120*l.*; Bristol, St. Ambrose, 125*l.*; Forest Town, Mansfield Woodhouse, Notts, 100*l.*; Langley Mill, St. Andrew, Heanor, Derby, 150*l.*; and Mitcham, St. Barnabas (City of London School Mission), Surrey, 175*l.*; rebuilding the Church of St. Stephen, Sneinton, Notts, 100*l.*; and towards enlarging the Churches at Pleasley Hill, St. Barnabas, Notts, 25*l.*; and Plumstead, Church of the Ascension, Kent, 100*l.* The following grants were also paid for works completed:—South Tiverton, Church of the Ascension, near Bath, 250*l.*; Walton, St. Mary, Suffolk, 15*l.*; Layer Marney, St. Mary Kelvedon, Essex, 60*l.*; Canford Cliffs, Church of the Transfiguration, near Bournemouth, 25*l.*; and Grimsby, St. Hugh, 40*l.* In addition to this the sum of 170*l.* was paid towards the repairs of fifteen churches from Trust Funds held by the Society.

Sketch for a Monument to the 1851 Exhibition. By Alfred Stevens.

ALFRED STEVENS.

THE name of this artist is to the fore at the present time with the instructive exhibition at the Tate Gallery, which was to have closed on January 14, but which will remain open until the latter part of March, and with the revived controversy regarding the expediency of completing the Wellington Monument in St. Paul's. The sketches in the Victoria and Albert Museum (Department of Engraving, Illustration, and Design) are of much interest, among them being the three which we reproduce this week. To these sketches and to the models in the Museum Mr. Edward F. Strange alluded in his paper read recently before the Architectural Association and reported in our issue of last week. The bronze equestrian statue completing the Wellington Monument in St. Paul's Cathedral has been placed in position. It was modelled by Mr. Tweed from the unfinished sketch by Alfred Stevens.



A Sketch by Alfred Stevens.

COLOUR AS APPLIED TO ARCHITECTURE.

THE usual fortnightly meeting of the Royal Institute of British Architects was held at No. 9, Conduit-street, W., on Monday, Mr. Leonard Stokes presiding.

Mr. H. T. Hare announced the decease of Mr. Bloomfield Bare, of Liverpool, elected Fellow, 1888.

Two papers on "Colour as Applied to Architecture" were then read, the first by Sir Alfred East, A.R.A., who, in the course of his remarks, said:—

"The architect is, or should be, responsible for the absolute completion of any public building, and it is unfair to criticise him if some local authority assumes the responsibility of its decoration. We know the difficulties which surround this question. It may be that the painter does not interest himself sufficiently, and has not been able to identify himself thoroughly with the aims of the architect, or that the architect approaches the question of decoration with preconceived ideas engendered by examples of the past, which may be in themselves very beautiful, but totally unfitted for the purpose he has before him. I would not claim that the architect should be necessarily instructed in the technical qualities of the various methods of painting, nor can it be expected that the painter should make himself acquainted with the constructive side of architecture, but a knowledge of each of their aims should be mutually understood.

It is a source of the greatest satisfaction to see that during the last generation the architect has taken the sculptor more thoroughly into his confidence, and I would like to see the same confidence extended to the painter. For I am under the impression that the place of the mural painting should have been considered by the architect in the creation of his plan as much as that of the sculptor. Neither are required for the actual structural qualities of the building, but both are a necessity for its perfect completeness. I do not think anyone would dispute the assertion that the noblest work of man is the combination of all the arts in perfect fitness, the combination of these arts into a building that would be devoted to, and best adapted for, the expression of the other arts of music or literature. Such a building would not be altogether dominated by the architect, to the exclusion of the sculpture and painting, but would be one that in its completeness was perfectly adapted to the purpose of its creation. Unfortunately, the opportunity of so expressing the unity of the arts is rare. But one such building in any country would mark it as exhibiting the highest understanding of the real purpose of art.

I believe that in all public buildings the architect should be held responsible for their entire completion, but what shall I say to the architect who designs a private house in which he leaves no place either for sculpture or painting? I think one of the causes of the decline in the purchase of easel pictures arises from the fact that neither the architect nor the commercial decorator ever considers that it is possible for the cultured man to be interested in the arts of painting and sculpture.

The fitness of colour for decorative purpose is a question that has never been adjusted by any rule except that rule which is applied equally to the architect and sculptor. The first and most important is the sense of scale. A responsibility rests

sometimes with the architect, who may not have considered the space suitable for the work of the painter or sculptor in his design. The great problem of the application of colour to decoration has been solved in some instances with success, and in every case that success has been achieved by the perfect sympathy of those concerned in its production.

Colour is entirely altered in its decorative quality by the shapes and sizes of its display. A certain arrangement of colour of certain sizes in conjunction may completely destroy the object of the architect, and yet the same series with a different arrangement may be perfectly satisfactory. Colour expressed in angular forms must convey a different decorative sense from the same colour displayed by rounded forms.

All form is expressed by the figures of the straight line and the curve. We have associated the conjunction of straight lines, the simplest figure possible having the triangle as a symbol, not only because it is the simplest figure possible in the use of lines, but because it is suggestive of something which lies outside, and points to the outside and beyond. The curve, on the contrary, completes its figure alone. The circle it describes is associated with completed things, and is materialistic; the incomplete always suggests possibilities. The complete is final.

I have pointed out the difficulties of the mural painter, and where the building has no history to record on its walls, but reserves its history for its literature, he might be asked if it were not possible better to satisfy the claims of the architect if he substituted decorative landscape in place of the illustration of an incident. It would give the painter a wider scope for a more personal expression, and he would be free from the conditions that so often make decoration a failure, for his materials are more at his discretion, both in form and colour, and, if he succeed, he will not fall into the difficulty of attracting unduly the attention of the spectator from the beauty of the architecture. I have known decorations which would, by their dominancy, suggest that the whole effort of the architect was to furnish him with a setting for his picture, whereas it should be considered from an entirely opposite point of view. And, in conclusion, I would appeal to those who have the responsibility of designing a great public building to bear in mind the conditions which must govern the mural painter, and, on the other hand, to the mural painter to consider that the architect has a right to expect that he should be supported in his architectural ideal."

Mr. Edgar Wood, F.R.I.B.A., contributed the second paper. He said that "a comparison between the Greek or Gothic use of colour as compared with that of the East resolves itself into a conflict between two opposing and antagonistic expressions, the expression of form and the appeal of colour, antagonistic because they represent two irreconcilable intentions. Colour is emotional, appealing to us by its emotional and sensuous faculties. It comes to us before form, representing nothing in itself, dependent upon the emotional feeling it produces and its rightful appeal to sensuous sensibility, whilst form is intellectual and its appeal is the outcome of reason.

Greek work as known to us is restrained on the emotional side, nor has it any touch of mysticism. This was always secondary to form, just as music was subordinate to poetry in songs, this tendency fitted in naturally with the general character of Greek art. In the East this is entirely the reverse; the emotional instinct proved too strong, and all is sacrificed and surrendered in order that colour may become the all-powerful appeal, for the very essence of the East consists in two dominant distinctions. Colour is there used for colour alone. It is not only richer, more powerful, more intense, but is convincing and satisfying by the quality of colour alone. In their hands it leaves no void of unfulfilment in its directness and intensity of appeal. It is vital colour, leaving the impression of colour as distinct from things coloured. Thus, again, it is not used merely to define the shape and object of things, and this great revision was accomplished by the assistance and employment of light and shade by which form was so lost, so controlled that it not only relinquished its ascendancy, but immediately became sufficiently pliable as to be dependent upon the power of this triumphant colour supremacy.

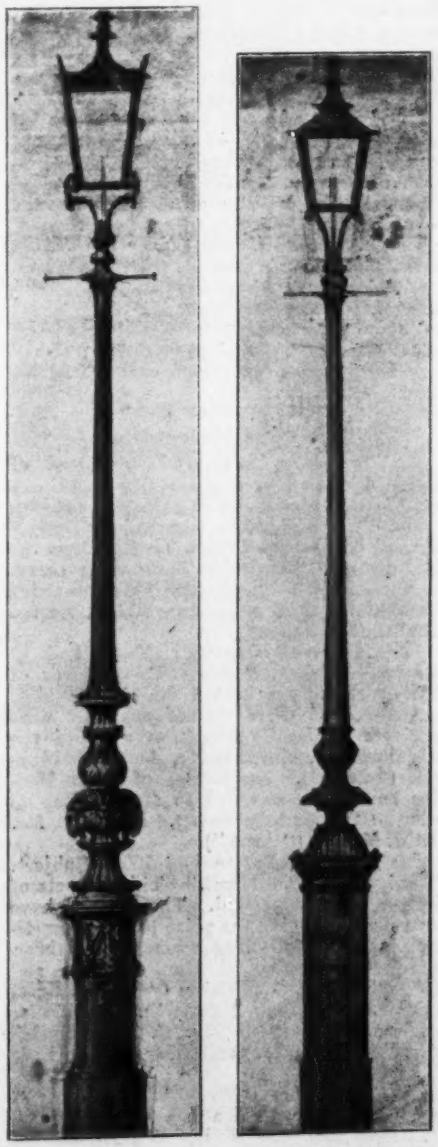
It was thus that the great colourists employed their great emotional appeal, and of which Venice is rich in its illustration. We recognise it amongst its painters, where the colour and glow of a Titian and a Tintoretto are precisely the same in purpose as the interior of the great basilica of St. Mark's.

Turning to domestic work, one problem that all architects have to consider is the right or the best treatment of the walls that will assist the easel picture, or, as some would say, to minimise the defects of the same.

It is the instinctive desire of all dealing with structure to give their work a lasting and permanent effect, to avoid any sense of detachment, unfixedness, or looseness, that the line shall be drawn sharply and logically between structure and portability, and that the dominant note shall always be that of structure, reducing as far as possible the degree and extent of the movable.

Many, I know, urge that the easel picture properly considered and placed in its right relationship to its surroundings by judicious treatment and hanging may be the acme of decoration, that its relation to a scheme of decoration may be like that of a jewel in a dress; but in this comparison a convincing one? The jewel in such positions is logical with the dress and wearer, because all are portable.

That thoughtful consideration in hanging, framing, and fixing can minimise much of the objection is admitted, as is shown in some of the rooms of the Ducal Palace at Venice, and also in those of the Vatican; but, however well marked, there still remains sufficient of the difference of aim and habit of mind of the two intentions, of the fixed aim of the architect or constructor, and the divorced and isolated thought of the painter.



Designs for Lamp-posts. By Alfred Stevens.

"The portability," Mr. Walter Crane writes, "of the easel picture has much to do with its unrelatable character. Destined for nowhere in particular, as a rule it goes out on tour—a member of a performing and often very diverse company"; and Mr. Furst says:—"The painters often resemble tailors making clothes which are not ordered and do not fit but accidentally."

I can think of no stronger guidance to decorative effect than the influence upon the painter of the walls themselves, provided he will allow their unconscious appeal its full scope by executing the work upon the site.

The Japanese method of showing one picture at a time is only a mitigation of the objection, and assists the problem but little, as the Japanese surroundings themselves are not so antagonistic to portability, being often themselves composed of movables having but little structural quality.

My own preference is towards the judicious employment of drapery as frequently offering a satisfactory compromise, the principle based upon the acceptance contained in the dress and jewel suggestion.

In thoughts upon the use of colour there is always to be remembered, though all-important the form and shape that an architect has given to his work, the surface alone derived from it always represents a large area, and all surface means colour, either of material or applied, and, therefore, the treatment of it remembered as quantity alone has an importance that should justify the architect in his legitimate desire to control the decoration.

I have the impression that colour of an enduring type, decoration even of an intending permanency, is still the unfortunate exception, not only in domestic work which can be partially excused by existing social conditions, but in our public and devotional buildings, where no such conditions exist. I do not only recall the absence of great mural decorations from which these buildings so lose the occasion of a great appeal and the opportunity of a great impression, but the same absence of colour and pleasure in colour is also missing in the minor surroundings.

Have the painters deserted us because they have other and better things to do, that decorative art has become the poor relation, that they have forgotten that "the best sculpture yet produced has been the decoration of a temple front, the best painting the decoration of a room," that portable art expressed by the easel picture, "independent of all place—to-day over the sideboard, to-morrow between the windows," can never supplant in importance the work of a fixed position. The more they are portable the more they become unsuitable; their offence often increases with their merit of realism.

In conclusion, architects should encourage opportunities to bring back the painter to their assistance, that the neglected art of great decoration shall be, so far as we are able, a neglected craft no more, but shall continue to embellish our efforts of the future as it has formerly jewelled and crowned others of the past."

Mr. Gerald Moira,

in moving a vote of thanks to the authors of the papers, said that one thing he enjoyed in Sir Alfred East's paper was that the author spoke up for his own job. He certainly thought that landscape painting, when done in the way that Chavannes did it, was the most beautiful decoration possible. He felt that at the present day more mural work was being used in buildings than at any previous period of their own time, and painters owed a great deal to architects. The great difficulty, however, was the length of the client's purse, and if they could only club together and do things a little more economically then, he thought, work might be done in the George V. era which would be of interest to future generations.

Mr. J. D. Crace,

in seconding the motion, said he would like to dwell a little on the architectural side of the question. Both authors had said how painters and architects desired to sympathise with each other, and that undoubtedly was necessary, but there were two or three kinds of sympathy. There was a very platonic sympathy and a real genuine and helpful sympathy. What was wanted in decoration

was not so much subtlety of mural painting, but that the architecture should be expressed. The great difficulty was that the modern English painter was not sufficiently versed in architecture to understand what the architect was longing for. The architect naturally was very unwilling to have his architectural effort destroyed by the location of colour in the wrong places. Sir Alfred East spoke of the architect providing spaces for the decorative painter, but the decorative painter had the building for his spaces, and the great thing was that he should select for his colour such distribution as would express the constructive form, and accept the spaces which the architect would naturally distribute in such a way as also to express structural form. In the execution of the mural painting itself there was much to be borne in mind with respect to the architectural aspect of the building. If they took the period between 1300 and 1600 they would see that the painters never left their paintings alone on the wall, but they always supported them with such accessories as would fit them to the building itself; and that was a point which appeared to be entirely overlooked by the modern painter. The scheme of the decoration of a building must not limit itself to paintings in certain positions, whatever their good qualities might be, but it should be to distribute colour in the building in such a way as to make the picture part of the architectural structure as well as a work of art. To illustrate what he had in his mind Mr. Crace exhibited a series of reproductions of the work of Giotto in the chapel of Padua, the frescoes of Domenico Ghirlandaio in Santa Trinita, at Florence, the interior of the Piccolomini Library at Siena, and of San Domenico at Siena. He pointed out that in all these cases the paintings had been welded into the buildings, and not left as isolated pictures on the walls. Architecture was made use of in the paintings themselves to convey the idea of stability.

Mr. H. H. Statham

said he thought the basis of the consideration of colour in architecture should have been a consideration of the colour which might be got for the architectural materials themselves, which was much neglected at the present day. They were content to build buildings in monochrome when they might have a great deal of colour by the use of various coloured materials. That was a much less intellectual side of the subject to that to which they had listened, but, still, from the architect's point of view, it was very important. Then he thought there was an unjust criticism of what was called the easel painting. At present there was a very confused use of the word "decoration." They used to think that decoration was painting treated in a somewhat conventional manner in order that the painting should not take away the idea that the surface was a wall. Now they had people telling them that this was nonsense, and that all painting was decorative painting. In a way it was, for every figure must be designed to have a harmony of line, and landscape was distinctly decorative in that sense. But he mentioned that there was a distinction between the decorative painting properly so called and the painting which depended upon itself. The latter was often one of the greatest efforts of art, and was a thing they looked upon as a poem in colour quite separate from its surroundings. Titian's picture of "Bacchus and Ariadne" in the National Gallery was not a decorative picture, but it was a splendid piece of colour, and it would assert itself independently of any surroundings they put to it. He said it was untrue of the great art of painting to say that it only came to its highest when it was conventionalised by its surroundings. Ford Madox Brown had been mentioned, but his best work was the picture of "The Last Sight of England," at present in the Tate Gallery. What he wished to see admitted was that painting had a claim for itself, apart from the merely decorative, and it ought not to be sneered at simply because it could be carried about and looked at.

Mr. H. G. Ibberson

said that Sir Alfred East's subject divided itself into two parts. He could understand what he said about architects bearing the picture in mind from the very first, but he did not grasp the mystical part when he said that colour suggested certain forms—that circular forms suggested materialism and straight lines spirituality. He would have liked a few more definite instances as to that. He thought if they had the opportunity of getting the assistance of such a great painter as he who decorated the Sistine Chapel he would not bother about the architectural features. He knew himself that if he could get Sir Alfred East to come into one of his houses he would not bother him about the architraves and cornices, but would let him loose on the plain surfaces. Then, with regard to colour, he would have liked to have had a definite instance of the form which scarlet suggested. Scarlet suggested no form to him except perhaps a form of political activity, with which he had not much sympathy. He noticed that the room they were in had a curved ceiling, whilst the room behind had a straight ceiling, and, therefore, according to Sir Alfred East's view, and, letting their President typify spirituality, ought they not to have held the meeting in the back room and brought the cakes and ale into this one?

The motion having been passed,

Sir Alfred East

said that if painting was taken out of their lives their lives would be very poor indeed. The fact that painting did not decorate a house was the fault of the architect, who did not make a place to fit it properly, and the sooner architects recognised the fact that they should have pictures in the house the better. There were many things which they hung on the wall which could be removed, and were they to be turned out of a house for that reason? Movability was the expression of life. It was the dead things which remained permanent, and that was why so much architecture was dead.

Mr. Edgar Wood

remarked that he never intended to say there was no use for the easel picture, but he did feel that the highest ideal of decoration and the finest result had never been brought about by the easel picture. Let them go to the finest picture galleries in the world and compare the impressions they got with those they received after seeing the work at the Sistine Chapel at the Vatican or at Florence, and anyone would feel that decoration intended for a place would always convey the greater impression than the greatest of easel pictures. The question of what was decoration was difficult to define—one could feel things which one could not define. He agreed that there was a place for what might be called the easel movable picture, such, for instance, as the altar.

Prizes and Studentships.

The Secretary then read the Deed of Award for the Prizes and Studentships—

The Essay Medal and 25 *guineas.*—Subject, "The Principles to be observed in Designing and Laying-out Towns, Treated from the Architectural Standpoint." Twelve essays were received. The Council have awarded the Medal and 25 guineas to Mr. T. Harold Hughes ("Redundancy").

The Measured Drawings Medal and 10 *guineas.*—Subject, "Measured Drawings of Ancient Buildings in the United Kingdom and Abroad." Five sets of drawings were received. The Council have awarded the Medal and 10 guineas to Mr. Arthur E. Maxwell ("Zeta"). Certificates of Hon. Mention have been awarded to Mr. A. Bayliss Allen ("Shopeinshoudes"), and to Mr. W. M. Keesey ("Arno").

The Soane Medallion and 100*l.*—Subject, "Designs for a Guildhall." Thirteen sets of designs were submitted. The Council have been unable to give the prize to any competitor, but the following awards have been made:—Certificates of Hon. Mention and 50*l.* each to Mr. W. Friskin ("Circle City") and Mr. P. de Joug ("Antæ"). Certificates of Hon. Mention to Mr. C. A. Harding ("Sailing Ship") and Mr. B. Lisle ("Vista").

The Owen Jones Studentship Certificate and 100*l.*—Two applications were received, viz., from Mr. Noël H. Leaver (to whom the Studentship was awarded), and from Mr. G. W. Mason.

The Pugin Studentship Silver Medal and 40*l.*—Nine sets of drawings were received. The Council have awarded the Studentship to Mr. James Macgregor. Certificates of Hon. Mention have been awarded to Mr. C. Peake Anderson, Mr. W. J. P. Jones, Mr. J. R. Leathart, and Mr. R. Norman Mackellar, who were bracketed as equal.

The Tite Prize, Certificate, and 30*l.*—Eleven sets of designs were received for "The Central Courtyard of a Royal Exchange covered with a Roof." The Council have awarded the prize to Mr. L. de Soissons ("Red Lion"), and a Certificate of Hon. Mention to Mr. T. H. Chalkley.

The Godwin Bursary Medal and 65*l.*—Drawings were received from Mr Geoffry Lucas (to whom the Bursary was awarded), and from Mr. A. F. Wickenden.

The Arthur Cates Prize, 40 *guineas.*—Drawings were received from Mr. J. B. F. Cowper (to whom the prize was awarded), from Mr. Claude Y. Hodges, and from Mr. Maurice Lyon.

The Grissell Gold Medal and 10 *guineas.*—Four sets of designs were received for "An Isolated Exhibition Building." The Council have awarded the prize to Mr. T. Braddock.

The Ashpitel Prize.—The Council have awarded the prize to Mr. P. D. Hepworth.

Travelling Students' Works.—The drawings by Mr. J. B. F. Cowper, Pugin Student, 1911, have been approved by the Council.

A speaker asked if the *bona fides* of the designs would be inquired into.

The President: Have you anything to tell us?

The Speaker: Some of the designs were made in Architectural Schools. Is this fair?

The President: Will you communicate with me?

The Speaker: I communicated with the Prizes Committee, and received no reply.

The President: I think you had better communicate with me. If you will, come and see me in my office to-morrow.

It was announced that the next meeting of the Institute would be held on February 5, when the President's address will be delivered, and a criticism of the designs and drawings will be given by Mr. Gerald Horsley. The presentation of the prizes would be made at the meeting.

BASING HOUSE.

IT is probable that few castles or mansions have played so important a part in the history of our land as Basing House; its siege alone constituting an interesting chapter in history.

Standing about 2 miles out of Basingstoke, with the weed-grown channel of the Basingstoke canal running by the old wall and octagonal dovecote, and past the "loftie gate-house with foure turrets looking northwards," the ancient pile is near one of the great trunk roads to London, and formerly, by reason of its strength and commanding position, practically held the key to the West of England. Originally it comprised two parts, a castle and a mansion, of which the oldest portion—the former—dated from 1261. The residential section of the structure was erected in 1509, and combined they formed the largest residence in England, regarding which old Thomas Fuller wrote in the XVIIth century:—"The greatest of any subjects' House in England, yea larger than most of the King's Palaces. The motto *Love Loyaltie*, well practised in it when, for resistance on that account, it was lately levelled to the ground."

The commencement of the Civil War found Basing House in the possession of John Pawlet, Marquis of Winchester, a devout Catholic and cavalier, who with a garrison of 800 men, vowed that he would hold the castle for the King, even though every other piece of land in England be wrested from him. The Parliamentarians quickly recognised the advantages attaching to the possession of the fortress, and for four years the gallant Pawlet withstood the Puritan siege, when, in 1643, Sir William Waller began two formal assaults, both of which, however, proved futile. Two years longer the stout old pile held out, and then Cromwell, his patience exhausted, determined to bring the "rebels" of Basing House to book. In October, 1645, he commenced operations with a train of siege guns, which took three days effectively to mount. The besieged scornfully refused to

[*Photo. by H. A. Aylward.*

The Dove Cote, Basing House.

surrender, and for two days the guns kept up an incessant fire. Eventually two wide breaches were made in the walls, and the Ironsides commenced to loot and plunder the citadel. Over 100 of the besieged were slain, and among those taken prisoners were Pawlet himself, Sir Robert Peak, and Inigo Jones, then a very old man. The castle was thoroughly ransacked, and jewels, gold, plate, and tapestry to the value of 200,000*l.* carried off and sold. In the midst of this wild scene of devastation and pillage flames were seen to burst forth, though what originated the conflagration has never been determined, and in a few hours the once lordly mansion lay a heap of smouldering ruins. In this condition it continued to remain for over two centuries, its battered defences covered with hawthorn, its earthworks hidden under a growth of ivy and herbage, until Lord Bolton, the present owner of Basing, decided to clear away the rubbish and restore what yet remained of the once famous "Loyaltie House."

During the excavations many interesting finds were brought to light, comprising shot, shells, bones, pottery, pipes, tiles, skulls, etc.

Perhaps the first thing that strikes the visitor now that the ruins have been laid bare is their great extent. According to Lady Winchester's diary of the siege, the castle "was in forme circular, encompassed with a brick rampart lyned with earth, and a very deep trench but dry," while the fortifications around it must have been very strong and formidable. In the centre of the fortress was a courtyard with two large wells, one of which was said to be the deepest in all England. The guard-room, kitchens, cellars, and larders are still in an excellent state of preservation, and on the walls of the cells drawings and letterings, evidently the work of prisoners, are still quite legible. In another portion of the ruins, the dining hall, chapel, and state apartments of the old structure can easily be traced.

Thanks to Lord Bolton, not a stone or brick of the ruins has been removed, and one may now walk over the same flint cobbles and quaint old pavement of kidney stones that existed before the direful conflagration reduced to ruins one of the finest piles of old-time England.

GENERAL NEWS.

Professional Announcement.

Mr. H. Bedford Tylor, Lic.R.I.B.A., for sixteen yeears architect and surveyor on the Bournville Estate, is now in practice on his own account at 20, Linden-road, Bournville, and care of Messrs. Mayhew & Darling, solicitors, 38, Waterloo-street, Birmingham.

The New Capital of India.

The *Times* Calcutta correspondent cables:—"It is officially stated that until the best European architect and sanitary engineer obtainable, both to be selected by Lord Crewe, have visited Delhi before and during the rains, the Government will select no site for the new capital, but will merely acquire land. A committee will subsequently sit to supervise the plans that have been agreed upon."

Paisley Abbey.

Towards the restoration of Paisley Abbey 8,000*l.* is being given by Mr. Robert Allison, merchant, of Paisley, for the erection of the great central tower, and 2,000*l.* by Mr. A. F. Craig, of Paisley, and his wife for the building of the cloisters. Recently, Mr. J. Stewart-Clark, of Dundas Castle, and his sisters gave 30,000*l.* for the restoration of the ruined choir, and only a small sum, it is stated, now remains to be subscribed to complete the scheme.

The Old Cottages at Guildford.

As a result of the expression of opinion at the recent meeting of the Surrey County Council, it is expected that the Highways and Bridges Committee will recommend the county authority to release the Town Council of Guildford from their undertaking to widen Farnham-road, and so obviate the necessity of demolishing the picturesque old cottages, the fate of which has been the subject of recent correspondence in the *Times*.

South American Project for Kingsway Site.

A scheme is on foot, it is stated, which will result in a combination of South American Republics for the purpose of erecting a large edifice on one of the Kingsway sites in which all their interests can be housed. The idea is to make the ground floor a great hall for the exhibition of products of the Republics, while on other floors will be reception-rooms, lecture-rooms, and offices.

Proposed Canadian Offices in London.

In the Canadian House of Commons Mr. Bradbury urged the erection of suitable offices in London for the High Commissioner and the immigration staff. In reply, Mr. Borden, the Premier, said he was in favour of the construction of a building worthy of Canada and the Empire, and he had noticed the satisfactory effort made by Australia in this respect. But it would be necessary, he considered, to have further data before entering upon the project.

Statue of William III., Petersfield.

The Urban Council, Petersfield, have appointed a Committee, of which Mr. H. Inigo Triggs, of Liphook, Hants, is the Hon. Secretary, for a restoration of the fine leaden equestrian statue of King William III. The memorial was erected in the market-place a long while ago at the charges of William Jolliffe, M.P. for the borough, and ancestor of the Lords Hylton. An appeal is made for contributions to a sum of 350*l.*, the estimated cost of the work.

Reredos, Christchurch Cathedral, St. Louis, U.S.A.

A reredos and high altar, one of the most important works of the kind erected in the U.S.A., was dedicated on Christmas Day at Christchurch Cathedral, St. Louis. The reredos and high altar, which were made in the studios of Messrs. Harry Hems & Sons, of Exeter, were conveyed from Exeter without injury, and were fixed by the firm's own men. The material is of Caen stone, and the height of the work is 35 ft. to the top of the cresting. The architects were Messrs. Tully & Clark, of St. Louis.

Antiquarian Discovery at Hatfield.

During the work of reconstruction of Goodrich House, Hatfield, which is now being carried out for Mr. F. W. Speaight, there has just been discovered the remains of a XVth century timber building, which has been hidden by brickwork for over two hundred years. A large number of silver and copper coins, dating from the time of Charles II. to George II., have also been found. The property was originally a portion of the Manor of Hatfield, and was sold in 1792 by the first Marquis of Salisbury to the Hart family, from the executors of which family it was purchased last year by Mr. Speaight, whose residence practically adjoins it on the south, Hatfield Park forming its northern boundary.

Dearer Coal—Cheaper Gas.

Coincident with a rise in the price of coal, the price of gas has been reduced 1d. per 1,000 cubic ft. by the Gas Light and Coke Company. This reduction—following upon a similar lowering of price each January for four successive years—brings the charge down to 2s. 6d. a 1,000 cubic ft. As the lower price for the consumer will mean higher dividends for the shareholders and bigger bonuses for the employees (under the company's scheme of co-partnership), the announcement will be the subject of very general congratulation.

The Royal Sanitary Institute.

The President of the Local Government Board, the Right Hon. John Burns, the Medical Officer, Dr. Newsholme, and Mr. Willis, Assistant Secretary, visited the Royal Sanitary Institute, 90, Buckingham Palace-road, London, S.W., on the 23rd inst., where, in addition to the permanent exhibits in the Parkes Museum relating to hygiene and public health, a special exhibition has been arranged of plans and models of shelters for tuberculose patients.

COMPETITION NEWS.

Winnipeg Legislative Building Competition.

The Secretary of the Royal Institute of British Architects has received from the Minister of Public Works, Manitoba, the following cablegram with reference to this competition :—"Date for acceptance of plans extended to March 31." We understand that Mr. Leonard Stokes, President of the R.I.B.A., has been appointed assessor in this competition.

Rochdale Infirmary Extensions.

Eleven sets of plans and designs were sent in by nine firms of Rochdale architects in the recent limited competition for the above extensions. They were adjudicated upon by Mr. Alexander Graham, F.S.A., F.R.I.B.A., of London, who made the following awards :—

First premium (50 guineas), Mr. Hugh Healey, A.R.I.B.A., of Rochdale and Manchester.

Second premium (30 guineas), Messrs. Sykes & Evans, of Rochdale and Manchester.

Third premium (20 guineas), Messrs. Butterworth & Duncan, of Rochdale.

Arrangements are to be made shortly for the exhibition of the drawings to the public.

New Church, Carrington.

Mr. Edward S. Prior, F.S.A., F.R.I.B.A., is the assessor in the competition for the new Parish Church of St. John the Evangelist, Carrington, Nottingham, the estimated cost of which is 9,000*l*. Designs by the twelve architects selected to compete were sent in on the 22nd inst.

Halifax Town Planning Competition.

Professor Adshead has recently given his award in the Halifax Town Planning Competition, the premiums in which were offered by Mr. J. Whitley, M.P. for the Borough, and the result, which was announced at a meeting in the Mayor's parlour, is as follows :—

First premium (100 guineas), Messrs. Longbottom & Culpan.

Second premium (30 guineas), Messrs. Medley Hall & Son.

Third premium (20 guineas), Messrs. C. F. L. Horsfall & Son.

Eight schemes were submitted in the competition, which was limited to Halifax architects.

Mr. Whitley stated that it would not be convenient for the drawings to be publicly exhibited forthwith, but he presumed that he might take it that the competitors would not mind leaving the plans in his hands for a few weeks until an exhibition could be arranged.

BOOKS.

Cathedrals of Spain. By JOHN ALLYNE GADE. Fully Illustrated. (London : Constable & Co., Ltd. 15s. net.)

THE cathedrals considered in this volume are Salamanca, Burgos, Avila, Leon, Toledo, Segovia, Seville, and Granada—some of the finest in Spain—and the author makes an interesting study of them in a happy blending of a not too technical and picturesque description. His intention is best described in the Preface, in which he says that certain buildings, and especially cathedrals, cannot be properly studied quite apart from what surrounds them, or from their past history. "To look comprehendingly up at cathedral vaults and spires, one must also look beyond them, at the city and the people and times that created them," and some such setting is here attempted, "in the hope it will not prove too technical for the ordinary traveller, nor too superficial for the student of architecture." If we are able to answer for the two classes of readers, we think we can claim for the author that he has achieved his object, for his work contains many pages of sound and interesting description which will be appreciated by the architectural reader, while the educated "ordinary traveller" with a love for ecclesiastical architecture will find his interest stimulated by a perusal of Mr. Gade's book. The richness of the country in great ecclesiastical buildings is well understood, and, though Spain is not as well known to the traveller as France or Italy, it is the ambition of most students of art to travel and see the architectural masterpieces of the country, and with this book in his hands the traveller will be helped to a proper appreciation of some of the great cathedrals there. The spirit in which the author writes will be realised from the following sentences referring to the monuments of Spain's greatness :—"If nowhere else in the world can one find such glorious works of art surrounded by such squalor, let us draw from the past the promise of a revival in Spain of all that constitutes the true greatness of a nation. . . . When the Spanish people have once more made education as general as it was under the accomplished Arabs . . their cathedrals will then stand in an environment befitting their grandeur, a society which will help them to transmit to coming generations the noblest, imperishable hopes of humanity."

Penmanship of the XVIth, XVIIth, and XVIIIth Centuries. A series of typical examples from English and foreign writing books. Selected by LEWIS F. DAY. Critical notes by PERCY J. SMITH. (Batsford. 18s.)

THE late Mr. Lewis F. Day, interested in everything which concerned the craftsman, made a special study of lettering, his books on the subject testifying to his judicial outlook. Mr. Day contemplated a book on penmanship, and put aside many illustrations which, since his death, have been studied by Mr. Percy J. Smith and supplemented for the purpose of the present book. Consisting mainly of reproductions, the book is not a difficult one to assimilate, and it gives food for thought in two directions. Firstly, we are astonished at the flexibility which was attained by the best writers of past centuries; secondly, we wonder to what extent the printing press influenced the art of penmanship. In many of the writings that exist there is a regularity and machine-like precision which must have been the cause of infinite labour to the scribe, without adding much to his reputation. Such painstaking work is marked by little individuality in design, and once the scheme of lettering was fixed upon the only faculties needed to produce page after page of MS. were a steady hand, a correct eye, and an abundance of patience. The type-like character of such work suggests that the scribes were endeavouring to emulate the mechanical qualities of machines. Yet we would dispense willingly with such methodical penmanship, and we turn to the less-perfect results achieved with the press and early movable types, through which design in the best sense was achieved.

Some scribes, however, understood exactly the advantages of deviation from mechanical penmanship, and, when the writing was placed on the page with due regard to area and construction, a beautiful result was attained. The good penman had no use for meaningless flourishes, but in the employment of graceful curves and rhythmical scrolls he found means to decorate his page, weaving around his words the most suitable embellishments.

While it is difficult to enter into the spirit of the work of less-hurried days, we can see the advantages of legibility and grace of outline. In modern printing there is ample room for the application of design, both as regards founts and display; and in the revival of good lettering, in which Mr. Lewis Day played so conspicuous a part, there is hope that inferior work will ultimately disappear. To attain this end the printer himself must be the true successor to the artistic scribe and learn the possibilities of the allied crafts. One of the most satisfactory results of the foundation of art schools is that in many cases opportunities are taken to learn the rudiments of design and the application of it to printing. The periodical exhibitions at the L.C.C. Central School, for instance, show the vitality of this branch of study.

To architects and their assistants this book on penmanship should prove suggestive. Beautiful writing gives distinction to architectural design, and drawings which are attractive throughout lose nothing in force.

CORRECTION.

In our issue of January 12 (p. 43) we referred to the baths erected at Winnington, Cheshire, for Messrs. Brunner, Mond, & Co. The name of the architect is given as Mr. L. W. Ensor, A.R.I.B.A.; it should have been Mr. A. E. Powles, F.R.I.B.A. We regret the mistake. Mr. Powles informs us that the special zig-zag bath cubicles and internal fittings were designed and carried out by the Leeds Fireclay Company.

BOOKS RECEIVED.

TECHNICAL ARITHMETIC AND GEOMETRY. By C. T. Millis, M.I.Mech.E. (London : Methuen & Co. 3s. 6d. net.)

CHIMNEYPIECES AND INGLE NOOKS. By Guy Cadogan Rothery. (London : T. Werner Laurie. 6s. net.)

THE ART OF THE ROMANS. By H. B. Walters. (London : Methuen & Co. 15s. net.)

CORRESPONDENCE.

The Policy of the R.I.B.A.

SIR,—As a good many letters have lately been published about the Policy of the R.I.B.A., may I draw attention to a point which, I think, needs a little consideration?

There are many young men who, between the ages of twenty and twenty-five, if a Registration Bill was passed might find themselves stranded through no fault of their own, unless special provision was made for them. For instance, many of these have entered architects' offices as pupils at seventeen. On completion of their articles, during which they may have passed the R.I.B.A. Preliminary Examination, not being able to take special courses of instruction owing to lack of funds, and in some cases because they must earn something to help pay their living expenses, they go on as assistants until good opportunities come to set up on their own account.

Now, if a Bill were passed these would have to take the Intermediate and Final Examinations, at least so it seems at present; and to pass these means either attending special classes, which needs cash, or else using every minute that can be spared after office hours in working up the subjects unaided, which is no light task, especially if no opportunities were given at school to learn mechanics, etc.; and if they do use up all that spare time their health is sure to suffer from lack of exercise.

At the universities and in the Services, I believe, candidates are allowed to take some examinations in two and sometimes three parts. Could not the Council of the R.I.B.A. make some arrangement on similar lines? It would also help those who, from reasons of health, cannot live in London or the big towns, and so cannot benefit from the many excellent classes held to prepare for these examinations. Correspondence courses may be suggested for these, but, with all due respect to the gentlemen who run these, one hour of good teaching in a class goes much farther than a week's hard working under the correspondence system, because in the former mistakes are corrected at once, while in the latter a week must elapse, by which time the student has partly forgotten what it was about.

If such a plan as I have ventured to suggest could be arranged, it would be better in every way; for an intending candidate could do his office work without trying to hurry over it, and in his spare time work up three or four subjects far more thoroughly in six months than he could the whole seven, and also find time for that one hour's healthy exercise, which would keep him fit. Could he not be allowed to take each examination in two parts, provided he took Part 2 within six months of passing Part 1?

I only make this suggestion because there are many young fellows who are anxious to pass these examinations if they could, but who cannot owing to causes which I have pointed out, and also because the present time seems to be a good one for the purpose.

A READER.

SIR,—I am afraid that a reader of your article published on January 12 might think that the reason the members of the R.I.B.A. refused to sanction the scheme for amalgamation with the Society of Architects was because they did not improve the draft Registration Bill.

A verbatim report in the *Journal* will shortly be sent to every member, and then it will be seen that there were several other reasons which influenced the rejection of the scheme by an enormous majority. This will also be made clear by the conversation at the end of the meeting; the proposer and

seconder of the amendment were asked if they limited the reference to the one point of the draft Bill, and the answer was that it must be referred back on every point.

I feel sure you would not like a false impression to be created in the minds of your readers, and consequently I ask you to kindly publish this letter.

SYDNEY PERKS, F.R.I.B.A., F.S.A.

The Clerk of Works and H.M. Office of Works.

SIR,—All H.M. Office of Works Clerks of Works of a certain number of years standing should be placed on the establishment without any reduction in salary, and given a pension at retirement.

A clerk of works is an officer holding an important trust; his services surely are at least twice as valuable as the most skilled mechanic on a building, and therefore his salary should never be less than twice the mechanic's wage, or, in other words, 4*l.* 10*s.*

Too frequently it is 3*l.* 3*s.* to 3*l.* 10*s.*; it sometimes reaches 5*l.* 5*s.* to 7*l.* 7*s.*, but not often.

The duties of an Office of Works Clerk of Works are far more arduous and need more skill than one who is employed by an independent architect.

He has numerous sub-contractors (I had fourteen on one job) to supervise, and has to value the work weekly, the contractor being paid on his certificate. Every variation requires an estimate as to saving or extra, and every account has to be signed by him.

If he is honest his banking account increases but slowly, and when he is of no further use to his employer he has only Heaven or the workhouse to go to.

Seeing that a clerk of works is a poor man usually drawn from the ranks of mechanics, has to possess a deal of highly-skilled knowledge, has to keep up an appearance, remain honest in face of temptation, is liable to periods of unemployment, the least the Office of Works can do is to give a pension and a permanent office to those who have given satisfaction in the past.

Until quite recently His Majesty's Office of Works did not even pay the cost of removal when sent from one job to another, perhaps 150 miles apart. ONE OF THEM.

Architectural Assistants and the Office of Works.

SIR,—Does "Fiat Justitia" in your January 12 issue desire your readers to infer that this Labour Member, so generously advocating the cause of the "Architectural Assistant" class, has been misled by one of its members, because if even one statement made were proved to be "exaggerated" or "unfounded" all others would remain under suspicion? But I find a marked unanimity of opinion existing in the numerous letters that have appeared for a considerable period, not only in your valuable medium, but also in the *Civilian* and other journals to which I would refer your correspondent; and I do not consider the statements I have read can be so described; and, seeing that the class is numerically small, it cannot be the expression of the "small minority," as he avers. But perhaps my own opinions as an onlooker for more than fifteen years, and in more than one branch, may have some weight. I have known the class termed "Junior Assistant Architects" long before any of the present generation existed, even as "Draughtsmen," and I have certainly not observed the "harmony" "Fiat Justitia" speaks of. I have observed, however, the absence of spirit displayed by the unestablished men, even the seniors, when ordered to do certain work which the chief has given to the established juniors to do themselves, who appear to imagine that establishment, amongst other things, gives them the power to act thus; although I must say I know of nothing in the regulations to this effect, and I have more than once expected to see it resented. But, for this purpose, they have been suitably impressed with the word "temporary." Also I have observed their "prescriptive right" to occupy, for the greater portion of the official day, a certain pattern of the chief's carpet, if he is there, with the object of the exclusion of the other class, who, until a few years back, took their instructions direct from him.

I believe the Architectural Assistant class feel strongly that justice would not have been withheld from them until now, in establishment and better pay, if this other class had not been willing so to act, and thus obtain by one leap a position over the heads of these seniors. This knowledge cannot readily be effaced even by the present overtures of their "sympathy."

The fact that the Junior Draughtsmen (afterwards Junior Assistant Architects) have been in most cases taught by the Senior Draughtsmen (now "Architectural Assistants") has been known and stated all these years, and this is the first time I have known it denied. I don't know who else there would be, unless it be the chief of the branch!

But I am glad to agree with "Fiat Justitia" as to the justice of the claims of the "Architectural Assistants" class, and it is to be deplored if anything is being done to jeopardise his individual efforts on behalf of the cause, which, we are assured, he is "trying to advance." TECHNICAL CLERK.

SIR,—When reviewing the answer given by Mr. Dudley Ward, representing the First Commissioner, in the House of Commons on November 24 last, who promised "to consider establishments for a professional class, numbering forty, termed 'Architectural Assistants,' employed for years past in his department," he spoke of "the consequent sacrifice of income demanded by the regulations" when passing from the unestablished to the established ranks, to pay for pensions, etc.; it should be understood that the "Assistant Architects'" Civil Service examination (the present unsatisfactory method of recruiting the established professional class) was altered from an open to a nominated one restricted to "Draughtsmen" in the department, in 1902, by reason of the inferior artistic material previously obtained, but by which, of course, all the present heads of the Architects' Division have entered, and that this was to be regarded as an opportunity expressly intended in future as some recognition of the efficient services of the "Senior Draughtsmen" class (termed "Architectural Assistants" since 1907) who were in receipt of 165*l.* and upwards per annum, and the salary was fixed for the successful candidates at 150*l.* per annum (subsequently 200*l.*), and so the Treasury rule referred to would have been met to the extent of 15*l.* or more. But, seeing that these senior men whilst engaged upon their daily duties had already been most thoroughly examined for years past by their Board, they naturally expected establishment without further test, and did not respond to the invitation to be nominated; and so for the past ten years the Treasury rule has been ignored by the department, for "Junior Draughtsmen" have been nominated mostly with short service (some only just attained the minimum age of twenty-three and some with only six months' service), and the successful ones have thus had their salaries increased, not diminished, and to the extent of some 70*l.* to 120*l.* per annum plus their pensions, etc.

Thus we observe the anomalous feature of a junior leaving one week-end at the rate of 30*s.* and returning the following week at 4*l.* plus "extras" to do the same work for the same employer. Is this consistent with true business method or common sense? *Ipso facto*, he was either underpaid before or overpaid after.

But the "Architectural Assistant" class look to their First Commissioner for justice when placing them upon the established list (and for precedent one of this class was established last year without "sacrifice") by a sympathetic consideration of the past injustice meted out to them, in the manner now recorded, and their long professional service with inadequate pay, to merit at the least equivalent rank with the "Assistant Architects'" class, constituting an increase to the majority and not a sacrifice of their incomes. JUSTICE.

[**** This correspondence must now cease.—ED.]

Skeleton-Frame Buildings.

SIR,—We shall be glad if you will kindly allow us the use of your columns in order to make an announcement that will, we feel sure, be of considerable interest to architects and others concerned in steel-frame buildings.

It is enacted in sect. 22 of the London Building Act (Amendment) Act of 1909 (9 Edward VII., cap. cxxx.) that, when it is proposed to erect a skeleton-frame building, copies of all the plans, sections, and calculations in detail shall be deposited with the district surveyor.

As it will manifestly be convenient alike to the architect, engineer, and district surveyor that these drawings and calculations shall be submitted upon a uniform basis, thus greatly reducing the labour of making and checking the calculations, the District Surveyors' Association (Incorporated) have, with the co-operation of the Science Standing Committee of the Royal Institute of British Architects and others, drawn up a scheme to be adopted by persons depositing plans, sections, and calculations with the district surveyor.

This scheme is now completed, and copies may be obtained of the Association's publishers, Messrs. Merritt & Hatcher, Ltd., 2, Grocers' Hall-court, E.C., price 2*s.* 6*d.* net.

The scheme provides for a uniform system of nomenclature, the adoption of uniform symbols, and uniform calculation sheets for pillars, beams, and foundations. It also contains the formulæ necessary for making the calculations, a schedule of weights of materials, and a number of tables of value. Samples of the various forms are attached.

(Signed) WILFRED J. HARDCASTLE, President,
BERNARD DICKSEE, Hon. Secretary,
District Surveyors' Association (Incorporated).

Dorton House, Bucks.

SIR,—I noticed in the Appendix No. I. of Mr. A. T. Bolton's list of dates on Jacobean Architecture in your issue of December 22 that the date of Dorton House, Bucks, is not ascertainable. I find on looking up the history of Dorton House that it was erected in 1627 upon foundations of an earlier structure.

The church which stands in the grounds is of the Decorated period. HUGH ROWDON.

INTERCOMMUNICATION COLUMN.

Workmen's Compensation and the Insurance Act.

SIR,—I should be glad if you can give me any information on one or two questions.

First of all, I am a bricklayer, and when I have not a job as foreman I sometimes take sub-let work. Now, I have an offer of a job—a good large one in London—and I am desirous of knowing if I should be responsible under the Workmen's Compensation Act (as sub-contractor for labour only), or if the contractor would be responsible for insurance against accident; if I should, could you give me the name and address of a good office.

Secondly, should I, as sub-contractor, be responsible for the employers' contributions, sickness and unemployment, to the national scheme? I take it that I should.

DAVID J. EAST.

[**** It is impossible to answer your question with any exactitude without knowing the exact terms of the contract under which you will be engaged. If you not only supply the labour, but the men are under your control, and are paid by you, you would appear to be an employer within the meaning of the Workmen's Compensation Act, and liable to pay compensation to an injured workman, or, if he claims compensation in the first instance from your principal, you may be liable to indemnify him under sect. 4. Therefore, if you exercise any independent control over the men you should insure. We cannot advise you by naming any particular office. Nearly all the old-established insurance companies undertake this branch of insurance on moderate terms. With regard to your second question, the Insurance Act does not come into force until July 15 next, and may be postponed to a later date by Order in Council. As regards health insurance, in determining who is an employer liable to pay contributions, the same considerations appear to arise as under the Workmen's Compensation Act, the power of control, power to select and appoint, power to dismiss and payment of wages; but in the case of employment insurance, regulations may be made by the Board of Trade under sect. 91, sub-sect. (f), which may affect this liability.—ED.]

EDITORIAL SUMMARY.

A critical review of the R.I.B.A. prize designs is given in our leading article.

In Notes Column (p. 86) will be found observations on: "Colour as Applied to Decoration"; "The R.I.B.A. 'At Home'"; "Wood Engraving"; "Hampton Court Palace"; "The Royal Academy Lectures on Sculpture"; "The Carpenters' Hall Lectures"; "New Zealand Parliament Buildings."

Three sketches by Alfred Stevens appear in this issue (pp. 88 and 89). They are given in connexion with Mr. E. F. Strange's lecture before the Architectural Association last week and printed in our last issue.

At the meeting of the Royal Institute of British Architects on Monday two papers were read on "Colour as Applied to Architecture," by Sir Alfred East, A.R.A., and Mr. Edgar Wood. At the same meeting the announcement was made of the names of the successful students in the annual competition for prizes and studentships (p. 88).

Book notices (p. 92) include: "Cathedrals of Spain"; "Penmanship of the XVIth, XVIIth, and XVIIIth Centuries."

In Correspondence columns (p. 92) are letters on: "The Policy of the R.I.B.A."; "Skeleton-Frame Buildings"; "Architectural Assistants and the Office of Works"; "The Clerk of Works and H.M. Office of Works"; "Dorton House, Bucks."

Notices of meetings of architectural societies (p. 94) include: "Nottingham Architectural Society"; "Manchester Society of Architects"; "Leicester Society of Architects."

Our Monthly Illustrated Review of Engineering (p. 97) includes: "Reinforced Concrete in Great Britain"—I., by Mr. W. Noble Twelvetrees; "Regent-street Polytechnic—III."; "Reinforced Concrete Applied to Buildings"; and Notes.

The Building Trade Section (p. 101) includes: "The Institute of Builders' Dinner"; "Government Contracts"; "The London Building Trade"; "Projected New Buildings in the Provinces"; "Applications under the Building Act, 1894-1909"; "Mahogany and Hardwood," etc.

A meeting of the Surveyors' Institution was held on Monday, when a paper was read, entitled "An Evening in the Institution Library" (p. 105).

The Tribunal of Appeal under the London Building Act sat on Monday to consider further the appeal by Messrs. W. G. Allen and H. G. Norris against the certificate of the Superintending Architect of Metropolitan Buildings defining the general line of buildings on the western side of Fulham Palace-road. A report appears on p. 106.

Our Law Reports (p. 107) include: "Ramsden & Carr *v.* J. Chessum & Sons"—building dispute; "Hallett & Langdale *v.* Cowdell"—building ownership dispute.

MEETINGS.

FRIDAY, JANUARY 26.

Royal Institution.—Professor B. Hopkinson, M.A., F.R.S., M.Inst.C.E., on "The Pressure of a Blow." 9 p.m.

Battersea Polytechnic (Lectures on Illuminating Engineering).—Mr. J. S. Dow, B.Sc., on "Shades and Reflectors." 7.30 p.m.

Leicester and Leicestershire Society of Architects.—Mr. H. F. Traylen on "The Architecture of Stamford." Lantern illustrations. 8 p.m.

SATURDAY, JANUARY 27.

Architectural Association.—Visit to the New Polytechnic, Regent-street. 2 p.m.

The Builders' Foremen's Association.—Eighteenth annual dinner, Holborn Resturant, King's Hall, W.C. 6.30 p.m.

MONDAY, JANUARY 29.

Architectural Association (Combined Meeting with the Camera, Sketch, and Debate Club).—Paper by Mr. A. G. R. Mackenzie, entitled "That Modern House Planning Tends to be Over-Elaborate." 7.30 p.m.

Royal Academy of Arts.—Professor W. R. Colton, A.R.A., on "Ideals and Ethics of Sculpture"—III. Lantern slides of ancient and modern works. 4 p.m.

Royal Society of Arts (Cantor Lectures).—Mr. Vaughan Cornish, D.Sc., on "Ocean Waves, Sea-Beaches, and Sandbanks"—II. 8 p.m.

Royal Sanitary Institute.—Mr. Charles Porter, M.D., B.Sc., on "Sanitary Law (a): Introductory Remarks," etc. 7 p.m.

Manchester Society of Architects.—Mr. Raymond Unwin on "The Town Extension Plan." 8 p.m.

University of London (Victoria and Albert Museum).—Mr. Banister Fletcher on "Spanish Renaissance Architecture." 5 p.m.

TUESDAY, JANUARY 30.

Royal Society of Arts (Colonial Section).—Mr. W. A. Legg on "Irrigation in South Africa." 4.30 p.m.

Northern Polytechnic Institute (Lectures on Illuminating Engineering).—Mr. F. M. Denton on "The Production of Electric Light and its Distribution."

Nottingham Architectural Society.—Mr. Arthur Marshall on "Pencil Sketching." 8 p.m.

University of London (British Museum).—Mr. Banister Fletcher on "The Roman Thermæ." Lantern illustrations. 4.30 p.m.

The Institution of Civil Engineers.—Paper, "The Central Heating and Power-Plant of McGill University, Montreal," by Mr. R. J. Durley, B.Sc., Ma.E., M.Inst.C.E. 8 p.m.

WEDNESDAY, JANUARY 31.

The Carpenters' Company (Lectures on Arts Connected with Building).—Professor Beresford Pite on "London: an Architectural Syllabus." 7.45 p.m.

Royal Sanitary Institute.—Mr. Charles Porter, M.D., B.Sc., on "Sanitary Law (b): Public Health (London) Act," etc. 7 p.m.

Incorporated Institute of British Decorators (Painters' Hall).—The drawings submitted in competition for the Travelling Studentship will be exhibited. The awards will be announced and the meeting addressed by Sir William Richmond, K.C.B., R.A. 8.30 p.m.

THURSDAY, FEBRUARY 1.

Royal Academy of Arts.—Professor W. R. Colton, A.R.A., on "Ideals and Ethics of Sculpture"—IV. Lantern slides of ancient and modern works. 4 p.m.

Society of Antiquaries.—8.30 p.m.

FRIDAY, FEBRUARY 2.

Royal Sanitary Institute.—Mr. Charles Porter, M.D., B.Sc., on "Sanitary Law (c): Factory and Workshop Acts," etc. 7 p.m.

Glasgow Technical College (Architectural Craftsmen's Society).—Mr. J. A. Lanchlan on "A Cistercian Monastery." 8 p.m.

Battersea Polytechnic (Lectures on Illuminating Engineering).—Mr. J. S. Dow, B.Sc., on "Daylight and Artificial Lighting Compared." 7.30 p.m.

The Institution of Civil Engineers.—Lecture on "Steam-Turbines: Some Practical Applications of Theory," by Capt. H. Riall Sankey, R.E., M.Inst.C.E. 8 p.m.

SATURDAY, FEBRUARY 3.

Aberdeen Architectural Association.—Paper by Mr. A. J. Wood, entitled "Under Italian Skies." Illustrated. 7.30 p.m.

ARCHITECTURAL SOCIETIES.

Manchester Society of Architects: Construction and Design.

On Wednesday, the 17th inst., Sir Charles A. Nicholson, Bart., read a paper on "Construction and Design." The President, Mr. Edgar Wood, occupied the chair.

Good construction and good design, Sir Charles Nicholson said, are equally necessary elements of our art, and therefore it is worth while to turn our attention to well-known buildings where the union of the two elements can be easily followed. He would confine his remarks that night to Gothic work. One point became obvious, that, as cathedrals were built in a leisurely way, each section, and even each bay, had to be structurally independent and self-supporting. Norman buildings lent themselves to this gradual method, but in Gothic structures strong temporary abutments had to be provided. The weakness of Norman buildings was due to the bad material rather than to thrusts; the collapses of Winchester, Chichester, and Ely towers were due to this cause. The weakness of Gothic structures was that they were maintained in a precarious state of equilibrium which approached instability.

Sir Charles then proceeded to very minutely analyse the development of Gothic construction, first as regards the relation of buttresses to the vaults they supported, then as to the development of the vaults themselves, and finally the evolution of the apse plan, paying special attention to the parallel process of evolution in England and France. Many points of interest in the construction of Wells Cathedral were instanced, and a section of the tower which was thrown on the screen was specially interesting, showing how the upper stages had been built as light as possible, and how the piers below had been strengthened by the well-known Strainer arches and the solid rood-screen, and how the tower was latterly stiffened by the filling up of the long lancet windows of the lantern. The ingenious way of augmenting the thrust of the eastern flying buttresses was illustrated; the lower portion of the buttresses, which are received by the slender marble shafts in the Lady Chapel, are built with courses oversailing towards the west. After a survey of the period of fan vaulting, the lecturer came to the application of the principles which we could discern in the old work to modern construction. How modern materials should be treated was a question still awaiting solution. Slides of ferro-concrete buildings, where the concrete was honestly shown and the monolithic nature of the structure expressed, were shown and much appreciated by the audience, most of whom recognised Sir Charles's own work in Jamaica. In concluding, the lecturer said that the present generation of architects was capable of evolving artistic solutions of each fresh constructive problem that arose, but they should make use of the large supply of knowledge to be gained from the stupendous works of the old masters of our art.

Leicester Society of Architects.

The 1912 session of this Society was opened at the Society's Rooms in St. Martin's East on the 19th inst. The President, Mr. W. M. Cowdell, F.R.I.B.A., was in the chair, and gave an interesting address. He alluded with regret to the recent illness of the late President, Mr. Keites, and expressed thanks to Mr. Keay for the attractive programme which had been arranged for the session, and also thanked the Hon. Secretary, Mr. Clement Stretton, for the earnest and thorough work he had done for the Society. He alluded to the fact that a member of the Society, Sir J. Tudor Walters, had received the honour of Knighthood. He congratulated Messrs. J. B. Healing, Wilfred Oxley, F. H. Morley, and C. J. M. Cowdell on their success in the R.I.B.A. Final Examination, qualifying for Associateship of the Institute, and hoped that all their names would shortly be enrolled. Proceeding, Mr. Cowdell drew attention to what had been termed "the new responsibilities of architects" in view of recent decisions as to the relative legal liabilities of architects and builders in regard to defects in buildings, and, after briefly dealing with certain of the points that had been raised, hoped that later in the session the members might have a discussion upon the subject. In conclusion, Mr. Cowdell drew attention to two interesting drawings which were exhibited in the room. These were two of the contract drawings made by the late Mr. F. W. Ordish when he extended the Corn Exchange and built the flight of steps in front of it. They had, he said, been in his possession over twenty years, and he only discovered them accidentally the other day. The address was followed by a musical evening, arranged by Mr. A. H. Hind, A.R.I.B.A., and Mr. W. H. Riley, A.R.I.B.A.

Nottingham Architectural Society: Visit to New Bank Premises.

Messrs. A. N. Bromley, F.R.I.B.A., and H. G. Watkins, A.R.I.B.A., architects, on January 16 invited the members of the Architectural Society to inspect the new premises for the National Provincial Bank, Ltd., now nearing completion, at the corner of High-street. Twenty-three members and friends accepted the invitation. Mr. Bromley first of all explained the plans, and pointed out the principal difficulties in connexion with the scheme and the manner in which they had been overcome.

The peculiar shape of the site necessitated special arrangement of planning, and the ancient lights of the adjoining properties had also to be considered. The foundations were honeycombed with the rock cellars of the former building, the main walls in places having to be taken down about 20 ft. to reach a solid foundation. The architects decided to carry out the whole of the front as one continuous design, and when the weather has toned the newness down a little the columns and carvings will, of course, show to better advantage even than at present.

The principal entrance had necessarily to be at the corner of High-street and Smithy-row, which, unfortunately, faces north, but the draught is cut off by means of a porch. Swing doors were considered too draughty, and, therefore, the doors are arranged so as to throw the incoming air towards the radiators. Another difficulty was that the sewer in High-street was not deep enough to

drain the lavatories, etc., in the basement without these being kept higher than originally intended, and a special arrangement is put in to prevent flooding the basement in time of storms.

The ground floor is occupied by the bank, and the manager's room is placed on this floor, enclosed with glass panels and a glass ceiling to keep out noise. There being very little light obtainable from the side and back owing to the proximity of the adjoining buildings, a glass dome has been erected, and forms a very pleasing feature. To prevent down draughts the dome is double.

The interior of the bank is very striking and is most tastefully designed. The walls are lined with grey and green marbles, and the floor with marble slabs. The beams of the ceiling are covered with fibrous ornamental plasterwork, and the woodwork is polished mahogany. All the fittings are of bronze, specially designed. In the basement are the strong-rooms, clerks' mess-rooms, lavatories, heating apparatus, etc. There are various offices over the bank premises, and a caretaker's suite of rooms above these.

The front has been built in Portland stone. The floors are fireproof concrete, and the window-frames on the ground floor are teak.

The contractors are Messrs. Dennett & Ingle, and the fibrous plaster enrichments to the ceiling and the wood and stone carvings have been done by Mr. G. Seale, of London. The bronze fittings were supplied by Messrs. Spittal & Clarke, of Birmingham, and the electric lighting by Mr. H. T. Hazledine, of Nottingham.

Mr. A. E. Heazell, on behalf of those present, thanked Messrs. Bromley & Watkins for giving them the opportunity to see the plans and the building, and especially thanked Mr. Bromley for personally explaining the various features and conducting them round. Mr. H. Gill seconded.

Mr. Bromley then took the party to Messrs. Griffin & Spalding's on Long-row, where very extensive alterations and additions have been recently carried out from the designs of Messrs. Bromley & Watkins by Messrs. Fish & Son, contractors. The difficulty here was to bring the varying floor levels (due to the steep incline of Market-street) into the general scheme and to obtain light. This has been successfully accomplished, and the long lantern lights form a very pleasing feature.

A very interesting afternoon concluded by Mr. Bromley inviting the visitors to join him at tea in the new tea-room.

Glasgow Technical College Architectural Craftsmen's Society.

At a meeting of the Technical College Architectural Craftsmen's Society, Glasgow, Mr. James S. Boyd in the chair, a lecture was given by Mr. James McKissack on "Rothenburg on the Tauber and other Bavarian Towns." The lecturer gave a general description of Bavaria, the situation and method of reaching the various towns. A great number of excellent slides were shown, proving its claim to be called a "City of dreams and fairy hills," rich in architectural and historic associations. The lecturer also gave a short description of other interesting towns, including Hamburg, Dinkleshull, etc.

ILLUSTRATIONS.

Voor Linden, The Hague.

THIS house is situated about four miles from the Hague in a charming setting of characteristic Dutch landscape. The estate is enclosed on the east and west by a belt of trees. The north is broken by a variety of fine old trees giving an irregular effect. To the south is a large meadow intersected by dykes, and a winding stream of ornamental water. The view is relieved by the distant woods. The house built in the Georgian period; the walls are of thin, hand-made Dutch bricks in two colours, the quoins being light red and the remainder dark red, laid with a light mortar joint. The arches over windows and doors are of hand-made tiles 1 in. thick. The roofs are covered with rough, hand-made tiles supplied by Messrs. Collier, Reading. The main entrance is treated with stone dressings of a fine-grained, mellow cream colour oolitic free stone from France.

The accompanying plan shows the ground-floor accommodation and part of formal garden. The staircase and all the decorative work of the great hall is of fumed oak, and is lighted by a dome.

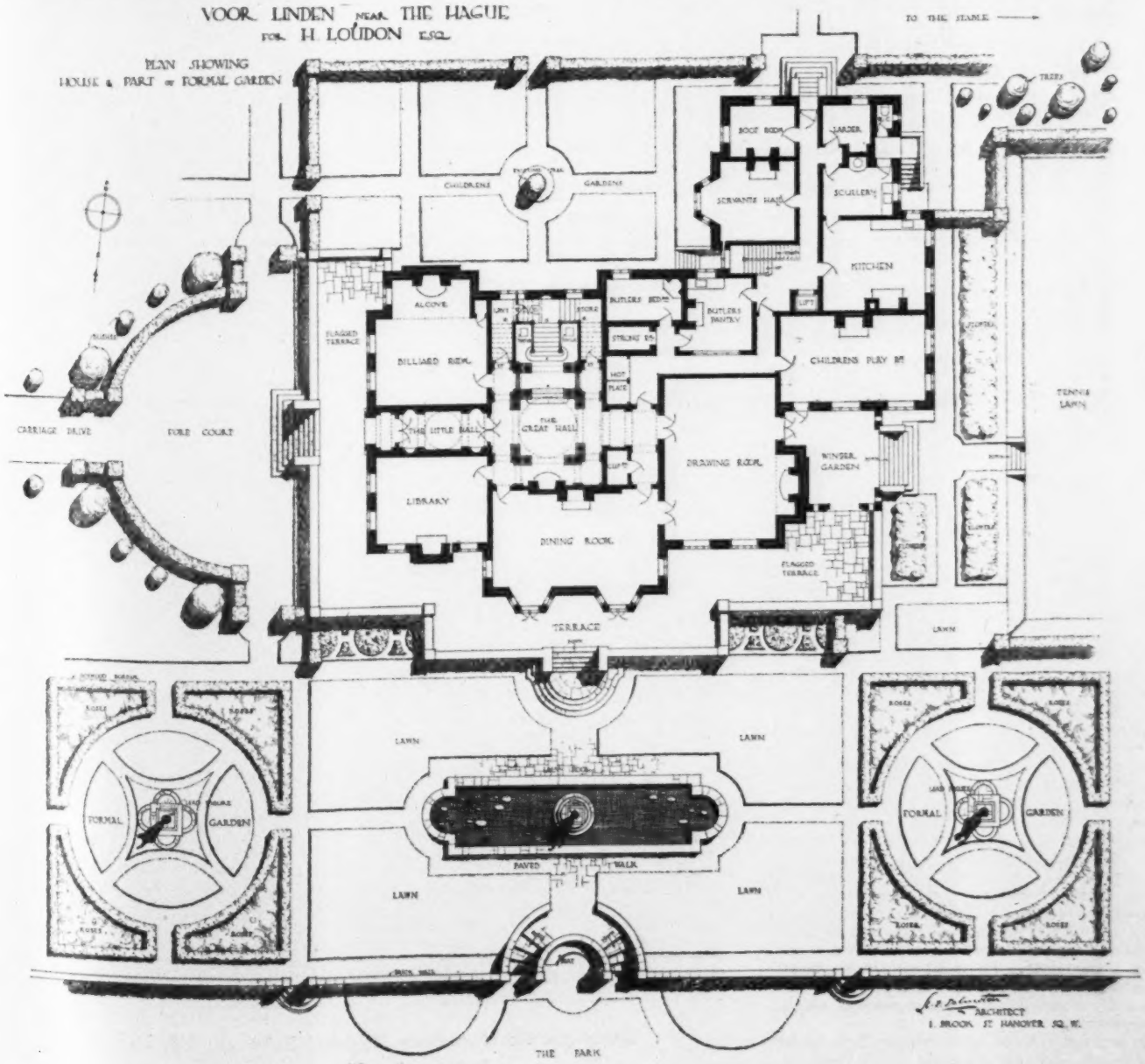
There are four suites of bedrooms with their bath and dressing rooms on the first floor, also nurseries, linen pantries, store cupboards, and the usual offices. On the second floor there is good bedroom accommodation, the laundry also being on this floor; an electric lift communicates with all floors. A central heating installation is provided for in the basement.

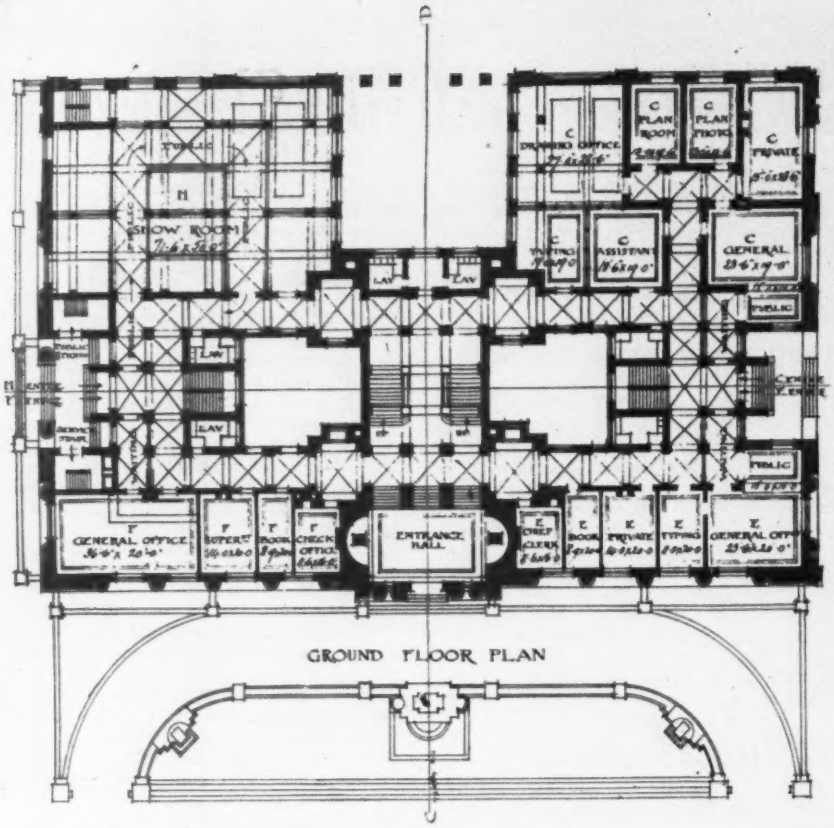
The stables, cottages, and garage buildings on the estate have been designed so as to be in keeping with the house.

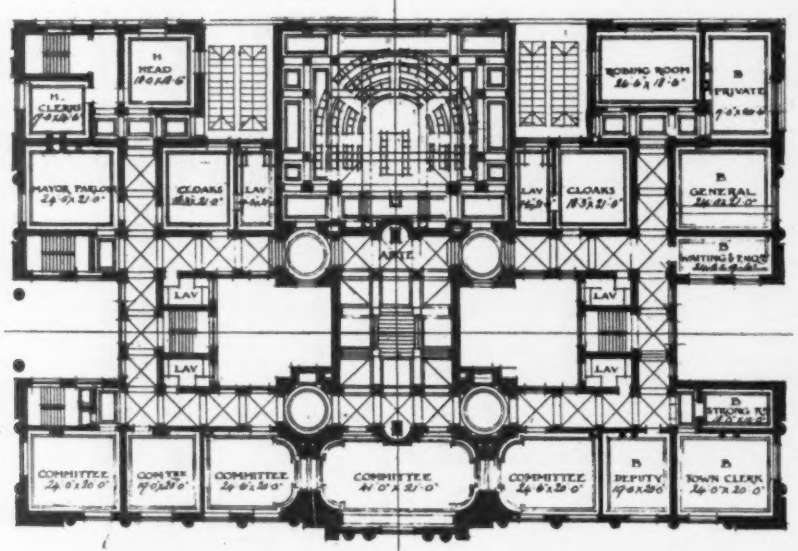
The builder is Mr. H. F. Boersma, The Hague; clerk of works, Mr. John Davies. The bills of quantities have been prepared by Mr. S. L. Gowlland, London. The architect is Mr. R. F. Johnston, Brook-street, Hanover-square, W

Designs for the Municipal Buildings, Marylebone.

FULL reference was made in our issue of December 8 to the competition for this building. We illustrate a design submitted by Messrs.







Design for Marylebone Municipal Buildings.

By Mr. S. Woods Hill, A.R.I.B.A.

Thos. S. Tait, James S. Whitelaw, and Cecil A. Sutton, A.R.I.B.A., who write as follows:—

"In designing the elevations of this building the authors endeavoured to make them genuinely expressive of the plan. The equal distribution of the piers throughout the plan is truthfully announced in all the elevations, thereby obtaining unity in the external treatment. The two important floors are emphasised externally by the larger order, whilst the suites of the main rooms are farther accentuated by raising the roof throughout the entire length of the main façade to Marylebone-road. A large pedimented central projection agreeably declares the position of the chief reception-room and the main entrance underneath; this portico is considerably wider than the pedimented ends, thereby forming a dominant note in the whole composition. The ¼-in. scale detail is of one of the pedimented ends of the main building, and contains the entrance for the rates department. The relation of this detail drawing to the complete elevation to Gloucester-place is shown by the accompanying small-scale drawing.

It was found to be quite impossible to make the council chamber a feature visible from the main frontage, as the ancient lights prevented the council chamber from appearing above the top of the main roof. It was also felt that a tower was undesirable on so small a building, as such a feature would be entirely dwarfed by the very high adjoining buildings.

Internally the same height of column used in the reception-rooms is used in the council chamber, but here the order stands on a high podium at the level of the spectators' gallery. This increased height gives added dignity, and is in harmony with the greater depth in the curved ceiling of council chamber.

The lavatory accommodation is grouped in the large wells on either side of the main staircase.

The service stairs are placed near the four corners of the building, thereby obtaining rapid and easy communication to the various departments."

We illustrate also the design sent in by Mr. S. Woods Hill, A.R.I.B.A., who writes:—

"The author felt that adequate access for carts to the back of the buildings should be a predominating factor in the scheme. The plan was, therefore, disposed so that all stores, coal, coke, electrical fittings and apparatus, borough surveyors' samples, contaminated food, etc., could be dealt with at a point as nearly central as possible within the building.

Little more need be said, but that the entrances to the various departments were grouped together round a recessed portion at either end of the building.

The rest of the scheme follows the obvious arrangement of a good central staircase with the committee-rooms and council chamber at front and back of same respectively."

FIFTY YEARS AGO.

From the *Builder* of January 25, 1862.

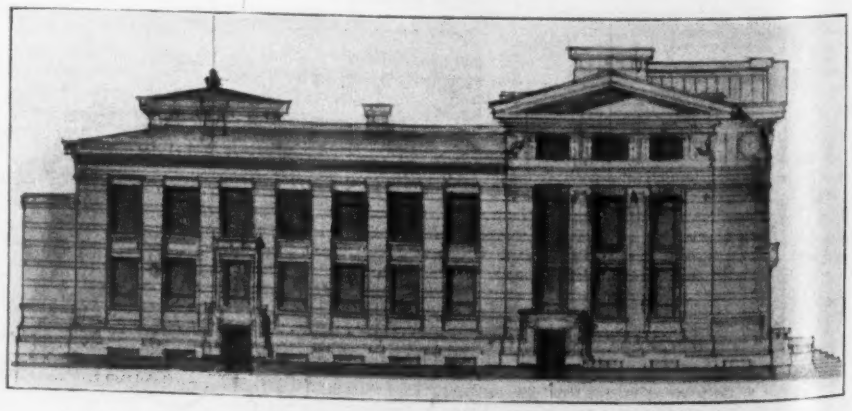
London on the Thames.

"THAMES, the most loved of all the Ocean's sons,"

has got into a sad mess; dirty is his bed, and squalid are his banks. We have made a few sketches to show what is the actual aspect on the river, of—

——"The glorious city,
Which holds the fair, the rich, the gay, the witty."

Before long now Parliament will be asked to settle something as to the embankment; and doubtless before the next summer has passed the work will be commenced, we hope, on both sides of the river, and that in the course of a short time we shall have a clearly defined and substantial margin to our great river, and a roadway extending on the north from Westminster to the Tower and on the south throughout such a distance as will afford the required convenience and prevent the damage which is caused by floods. In arranging this matter there should be no half-measures. To stop short on the north side, as is proposed by some, at Blackfriars Bridge, would be a mistake, for independently of other considerations a better roadway along the part of Thames side, which leads from Blackfriars to Tower-hill, is most necessary for the accommodation of the present large and constantly increasing traffic. From morning till night these narrow streets are choked. In the vicinity of the Custom House and Billingsgate the confusion is generally so great that it is not easy for even foot passengers to make their way.



Design for the Marylebone Municipal Buildings: Side Elevation.

By Messrs. Tait, Whitelaw, & Sutton.

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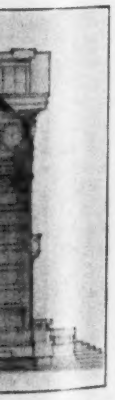

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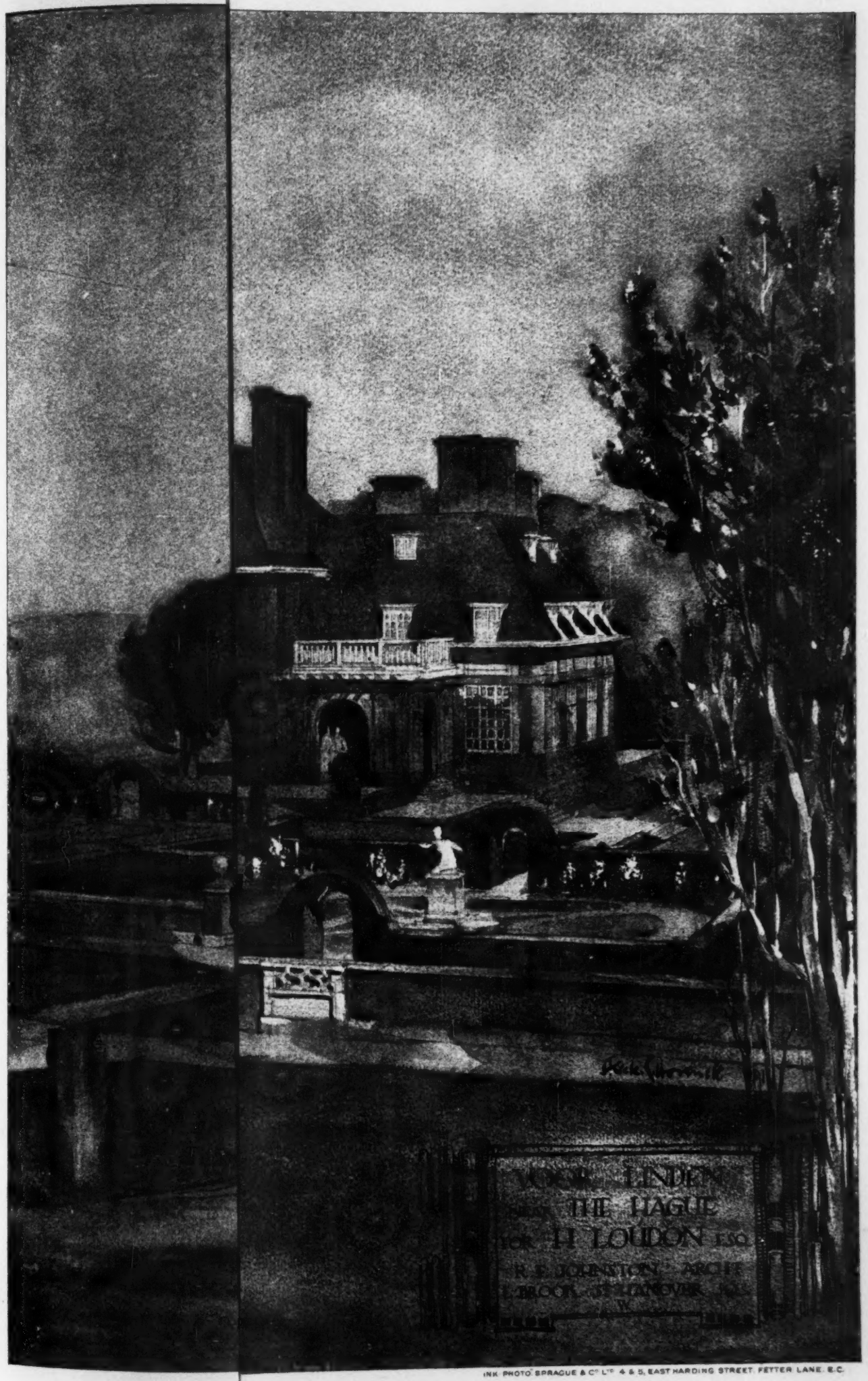


INK PHOTO SPRAGUE & Co LTD 4 & 5, EAST HARDING STREET, FETTER LANE, E.C.

as such a feature would be entirely dwarfed by the very high adjoining buildings.

Internally the same height of column used in the reception-rooms is used in the council chamber, but here the order stands on a high podium at the level of the spectators' gallery. This increased height gives added dignity, and is in harmony with the greater depth in the curved ceiling of council chamber.

The lavatory accommodation is grouped in the large wells on either side of the main staircase.

The service stairs are placed near the four corners of the building, thereby obtaining rapid and easy communication to the various departments."

We illustrate also the design sent in by Mr. S. Woods Hill, A.R.I.B.A., who writes :—

"The author felt that adequate access for carts to the back of the buildings should be a predominating factor in the scheme. The plan was, therefore, disposed so that all stores, coal, coke, electrical fittings and apparatus, borough surveyors' samples, contaminated food, etc., could be dealt with at a point as nearly central as possible within the building.

Little more need be said, but that the entrances to the various departments were grouped together round a recessed portion at either end of the building.

The rest of the scheme follows the obvious arrangement of a good central staircase with the committee-rooms and council chamber at front and back of same respectively."

FIFTY YEARS AGO.

From the *Builder* of January 25, 1862.

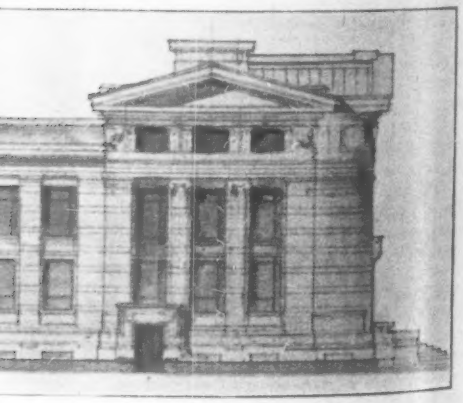
London on the Thames.

"THAMES, the most loved of all the Ocean's sons,"

has got into a sad mess ; dirty is his bed, and squalid are his banks. We have made a few sketches to show what is the actual aspect, on the river, of—

——"The glorious city,
Which holds the fair, the rich, the gay, the witty."

Before long now Parliament will be asked to settle something as to the embankment; and doubtless before the next summer has passed the work will be commenced, we hope, on both sides of the river, and that in the course of a short time we shall have a clearly defined and substantial margin to our great river, and a roadway extending on the north from Westminster to the Tower and on the south throughout such a distance as will afford the required convenience and prevent the damage which is caused by floods. In arranging this matter there should be no half-measures. To stop short on the north side, as is proposed by some, at Blackfriars Bridge, would be a mistake, for independently of other considerations a better roadway along the part of Thames side, which leads from Blackfriars to Tower-hill, is most necessary for the accommodation of the present large and constantly increasing traffic. From morning till night these narrow streets are choked. In the vicinity of the Custom House and Billingsgate the confusion is generally so great that it is not easy for even foot passengers to make their way.



unicipal Buildings : Side Elevation.

Whitelaw, & Sutton.

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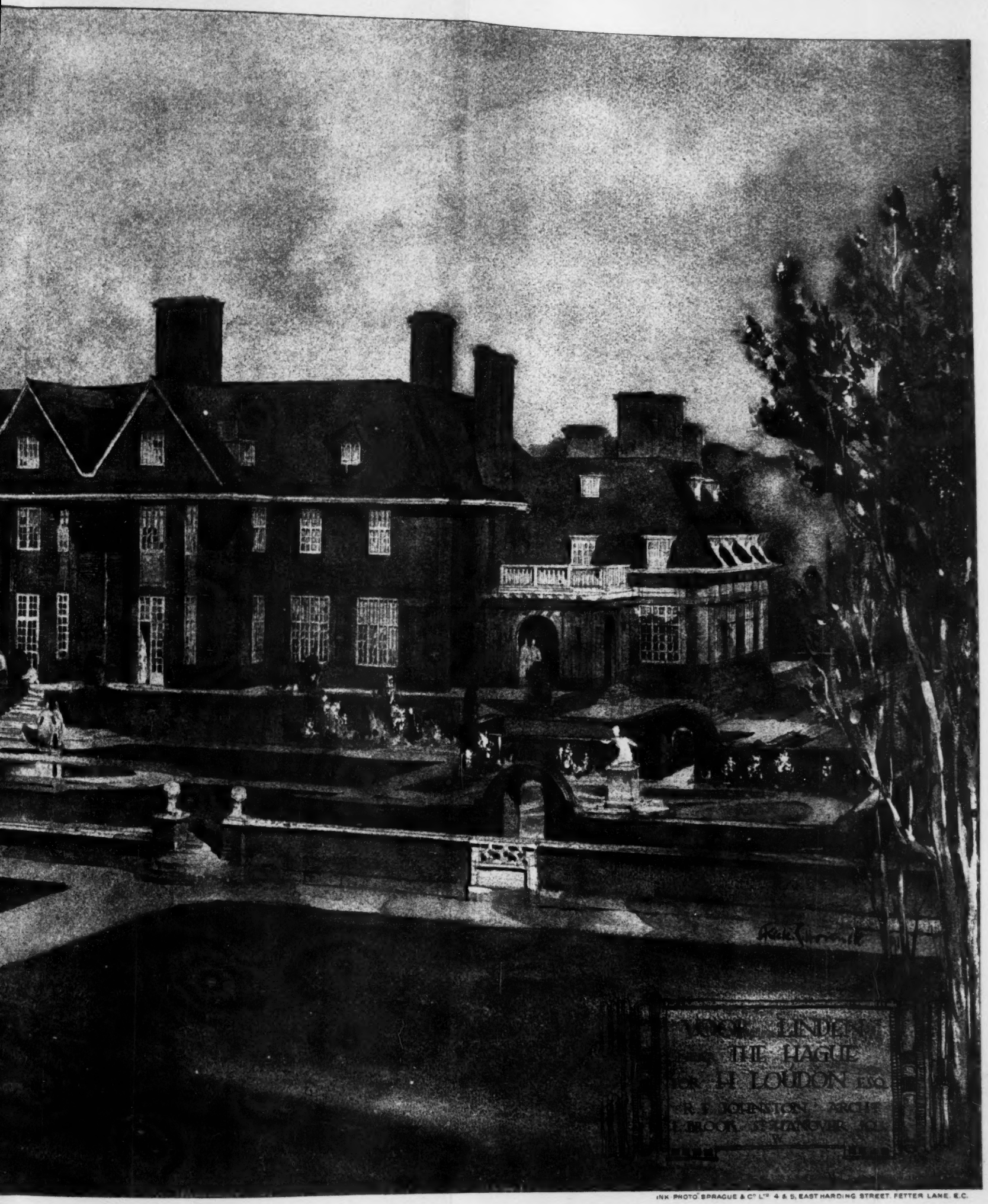

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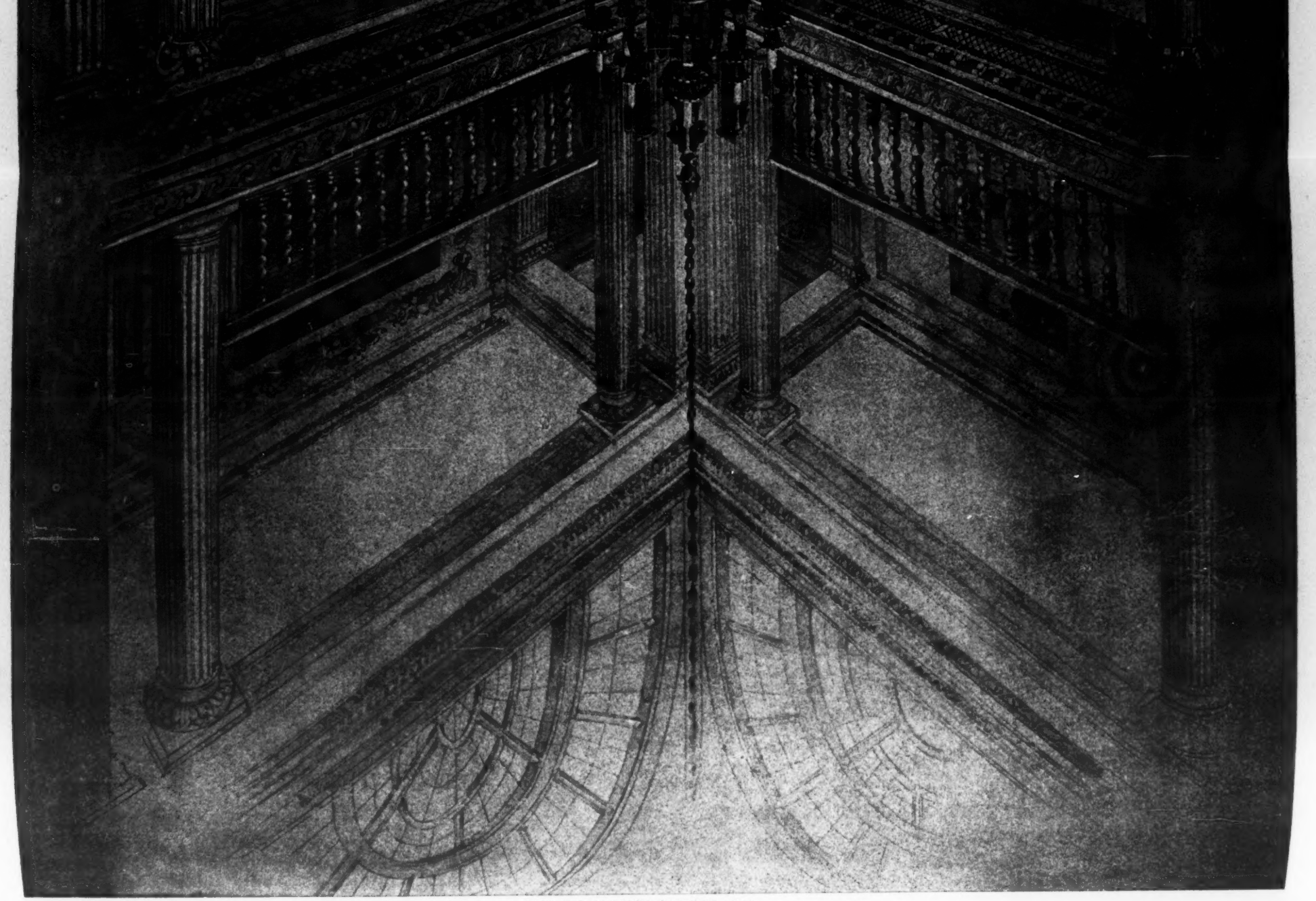
NDEN, NEAR THE HAGUE.—Mr. Robert F. Johnston, Architect.



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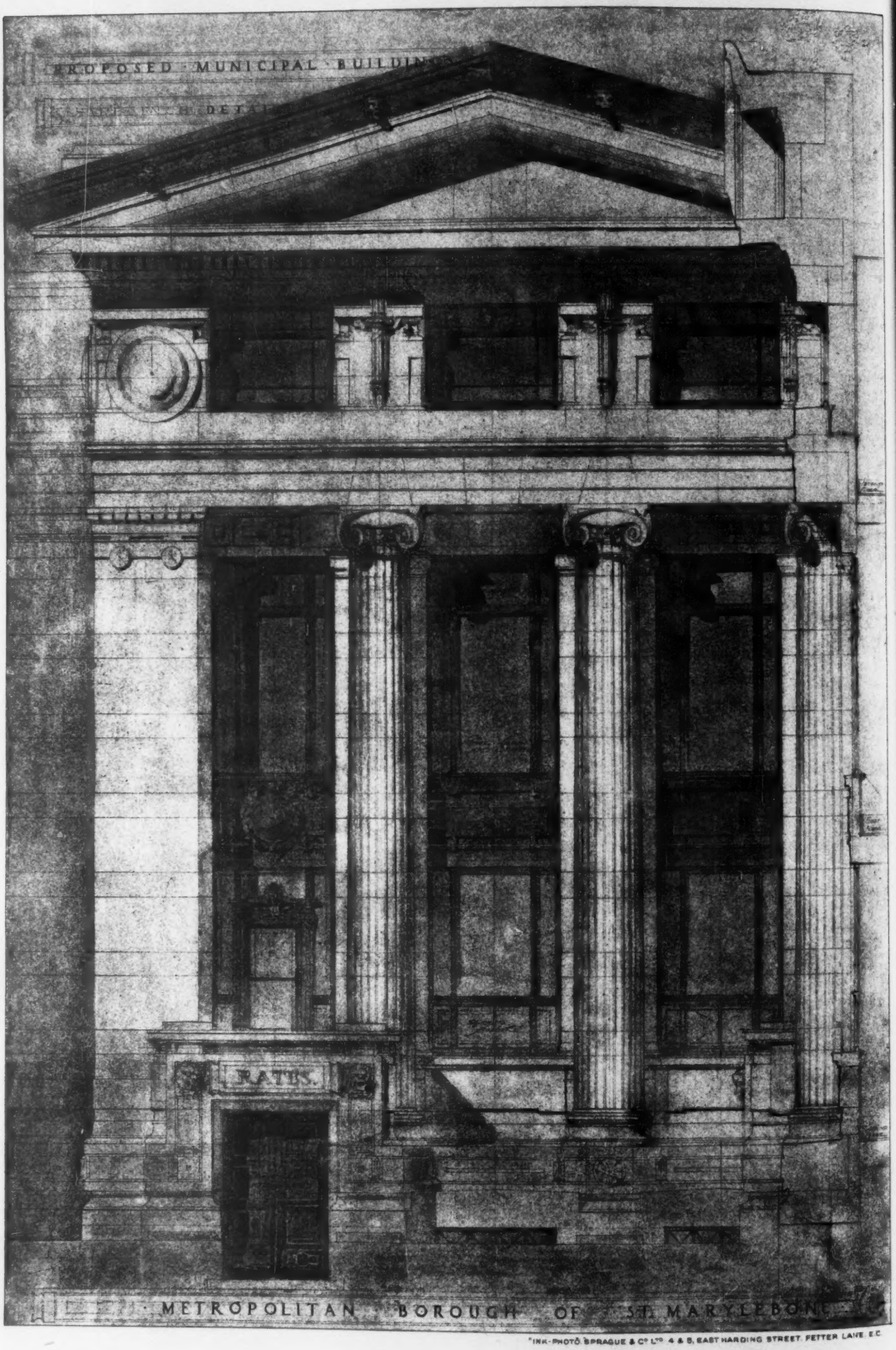
VOOR LINDEN, NEAR THE HAGUE.—Mr. Robert F. Johnston, Architect.



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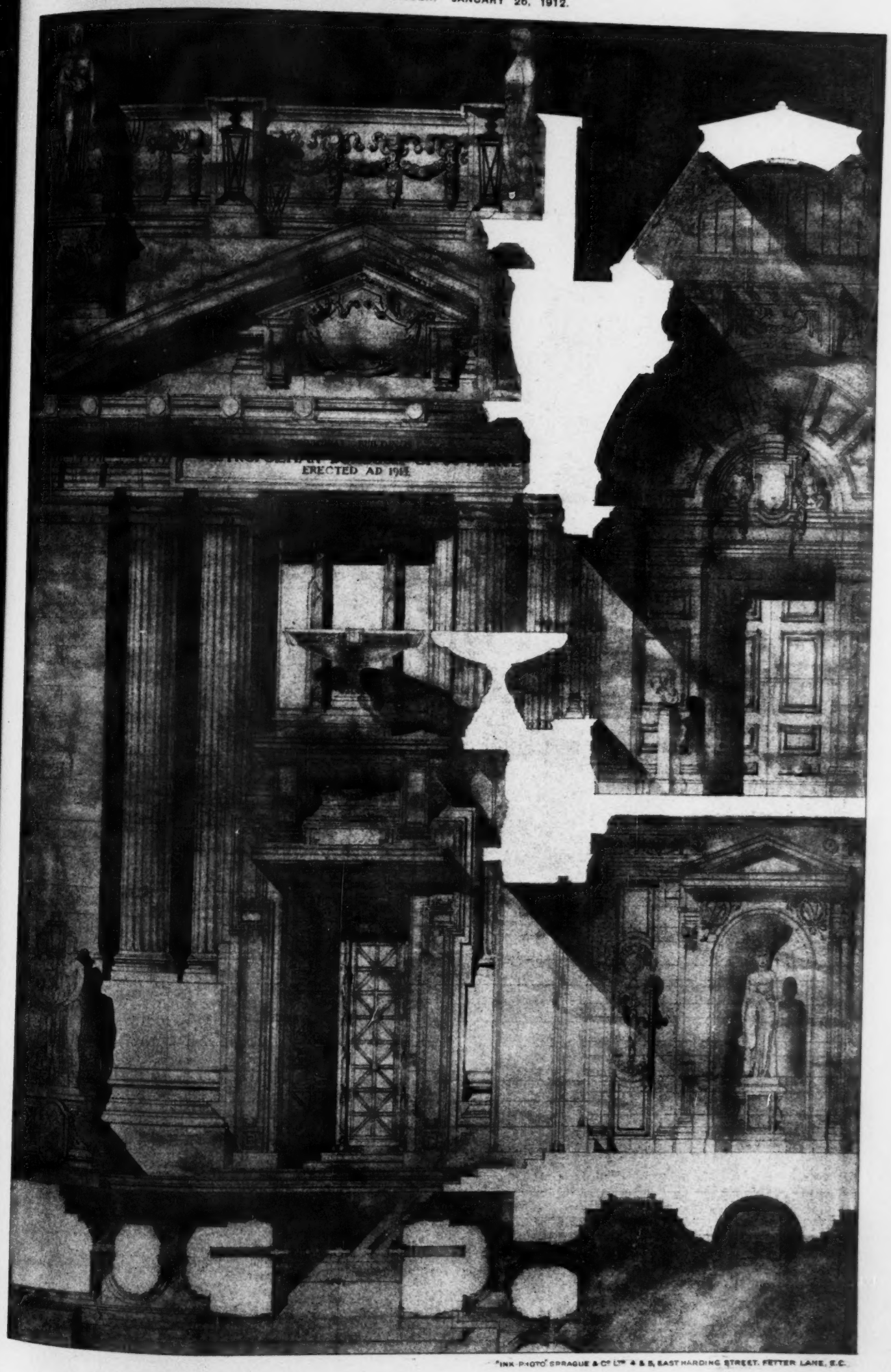
MARYLEBONE MUNICIPAL BUILDINGS COMPETITION.—DETAIL OF DESIGN BY MESSRS. TAIT, WHITELAW & SUTTON.



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MARYLEBONE MUNICIPAL BUILDINGS COMPETITION.—Detail of Design by Mr. S. Woods Hill, A.R.I.B.A

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MONTHLY REVIEW · *of* · ENGINEERING.

REINFORCED CONCRETE IN GREAT BRITAIN.—I.

By W. Noble Twelvetrees.

Introduction.

As far back as the early years of the XIXth century the idea of strengthening cast-iron and wrought-iron structures by the addition of concrete, or of strengthening concrete structures by the addition of iron, was suggested and applied in practice by certain British architects and engineers.

The general principle thus originated seems to have been neglected in this country at the period of which we write, although the hint was taken by Continental and American constructors, with the result that buildings and other structures began to be erected in a crude form of reinforced concrete.

About the middle of last century several clearly-defined systems made their appearance abroad, some probably having been developed from the first British suggestions, and others due to the initiative of the inventors concerned.

The history of reinforced concrete as a structural material and reinforced concrete construction as a system of building construction has been so frequently told that readers need not be wearied by its reiteration in the present series of articles. Attention may be directed, however, to some pioneer patents in the United Kingdom which show that reinforced concrete, properly so termed, is by no means a new thing in this country.

In his patent of 1854 Wilkinson, of Newcastle-on-Tyne, describes the use of iron rods or ropes embedded in concrete for withstanding tension. The drawings accompanying the specification show the manner in which the inventor anchored the ends of the reinforcement to obviate the risk of slipping as the result of longitudinal shear when the reinforced concrete was under flexure. Thus it will be seen that Wilkinson clearly grasped the principles underlying genuine reinforced concrete construction. In his 1855 patent François Coignet describes a form of concrete, termed "béton Coignet," and a method of reinforcing floors with iron rods arranged to constitute a network which was carried by iron beams in floors of great span and large area. Matthew Allen, a London builder, obtained a patent in 1862 for flooring reinforced by flat and round bars placed near the lower surface of the concrete so as to form a tension network. This type of floor was used in the Columbia Market, Shoreditch, and elsewhere.

The patent of Brannon, dating from 1871, proposed the employment of reinforcement in the form of a metal skeleton upon which to stretch open wirework. Although the system never came into general use it constituted an anticipation of later patents, based upon the same general idea, which, however, cannot properly be regarded as complying with the principles embodied in reinforced concrete proper.

Joseph Monier, to whom a British patent was granted in 1883, was a noteworthy pioneer on the Continent, but is known merely by name in this country, where his system never took root.

François Hennebique, whose first British patent dates from 1892, deserves credit for the extensive development of reinforced concrete in numerous countries, his efforts having been ably seconded by the late Mr. L. G. Mouchel, by whom the Hennebique system was introduced into the United Kingdom in 1897.

When the practicability of reinforced concrete had been firmly established several systems, previously employed on the Continent and in America, were introduced here, and subsequently some systems of British origin were evolved, the position at present being that architects and engineers have available for selection numerous methods of applying concrete and steel in the combination now generally termed "reinforced-concrete."

Some of the methods involve the acceptance of systems, properly so called, where ordinary commercial forms of steel are utilised and which represent special arrangements of the reinforcement. Others, again, depend upon the use of steel rolled or otherwise manufactured in distinctive forms, for which certain advantages are claimed.

The selection of the most appropriate system for any given class of structure is not an easy task unless the architect is well grounded in the theory and practice of reinforced concrete, and the difficulty of choosing wisely is rendered somewhat more difficult than it would otherwise be by the handbooks which are issued by most of the firms concerned. As a rule, these books are very ably written, and the only conclusion to be drawn from careful study of them is that each system must be better than all the others. So confusing are studies of this kind to the inexperienced that we have known cases where two or more systems have been combined, and in one instance an architect acting on his own initiative designed the main and secondary beams for the floors of a building with reinforcement consisting of rolled steel joists and two patented types of reinforcing bars. The hope that a triple factor of safety would be secured by this multiple use of advantageous reinforcing elements was not realised, for the flooring proved unable to carry its own dead weight.

As a preliminary to the consideration of reinforced concrete systems and patented auxiliaries, it may be convenient to state briefly the more important facts to be borne in mind by the architect concerning the nature of reinforced concrete itself.

Reinforced concrete may be defined as the combination of concrete and steel in such manner that the most valuable properties of each constituent are utilised to the greatest possible advantage.

Well-made concrete offers great resistance to the transmission of heat and sound, is impenetrable by water and moisture, is one of the best fire-resisting materials known, and instead of deteriorating under atmospheric influences actually improves with continued exposure. Therefore it is an ideal building material, well adapted for the protection of steel, which, as our readers are aware, is very deficient in respect of all but one of the above-stated properties.

The use of concrete for the protection of steelwork is quite justifiable, but it must be clearly understood that a concrete-sheathed steel structure does not represent reinforced concrete, and would be more appropriately designated reinforced steel.

Concrete is relatively strong in compression and weak in tension, while steel is of approximately equal strength both in compression and in tension.

Volume for volume, concrete costs about one-fiftieth the cost of steel.

Area for area, steel will withstand about thirty times the compression and about three hundred times the tension that can be resisted by concrete.

The foregoing data are only applied in designing after certain necessary modifications, but will suffice to show that for equal resistance to compression the cost of concrete is only three-fifths that of steel, and that for equal resistance to tension the cost of steel is only one-sixth that of concrete.

Beams.

The great economy of concrete in compression and of steel in tension account for the economy of beams where concrete takes all compressive stress and steel takes all tensile stress, the most advantageous beam form being one of T-shape, where the concrete in the compression area is relatively of large cross section, and the concrete in the tension area is only of such cross section as will provide for enclosing the steel and insuring the requisite lateral rigidity of the rib.

In the selection and arrangement of steel for reinforcement an important matter is to bear in mind the desirability of concentrating the metal as closely as possible along the axis of tension and to arrange the steel so that the axis of tension shall be at the greatest possible distance from the neutral axis of the beam.

These points are illustrated diagrammatically by Figs. 1, 2, and 3, where it will be seen that the axis of tension for a rolled steel joist, used as reinforcement in the manner adopted in certain types of composite flooring, is considerably nearer the neutral axis of the beam than the corresponding axis for small round bars in two rows and a single row, the axis for the last arrangement being the lowest of the three.

If we take the depth of the beam from the top to the axis of tension the length of the lever arm for the internal forces would be approximately as follows—

Fig. 1 . . .	R.S.J. . . .	14½ in.
Fig. 2 . . .	4 bars . . .	16½ in.
Fig. 3 . . .	2 bars . . .	18 in.

As shortening of the lever arm involves proportionate diminution of resistance moment the practical disadvantage of any reinforcement type or any arrangement of reinforcing bars having the effect mentioned is quite apparent.

Further, it must be remembered that the permissible working stress for steel in tension would be greatly exceeded below the axis of tension if the steel at that axis in Fig. 1 were allowed to be stressed up to the permissible limit, while at the same time the steel above the axis of tension would work at much below the same limit. Therefore, assuming 17,000 lb. per square inch to be the permissible working stress at the bottom flange of the rolled steel joist, the working stress at the axis of tension would be only about 12,000 lb. per square inch.

Similarly, for the two rows of bars in Fig. 2, the actual stress of about 15,500 lb. per square inch at the axis of tension would correspond with 17,000 lb. per square inch for the bottom bars, while in Fig. 3, the whole of the metal may be taken as working at the mean stress of 17,000 lb. per square inch, the excess in the bottom fibres being permitted by the recommendations of the R.I.B.A. Report and generally sanctioned by other authorities.

We need not weary our readers by calculations which they can easily perform for themselves, but will simply point out that the beam in Fig. 2 is 50 per cent. stronger than that in Fig. 1, and the beam in Fig. 3 is 75 per cent. stronger than that in Fig. 1, neglecting in each case the comparatively small element of strength due to the independent moment of resistance of the rolled steel joist.

Another matter of considerable importance is the quality of the steel involved in the different systems of reinforced concrete construction.

As the tenacity of concrete is overcome by the elongation of the embedded reinforcement at comparatively low stress nothing is allowed for the tensile resistance of the

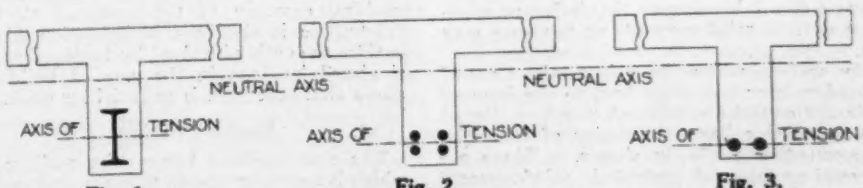

Fig. 1. Fig. 2. Fig. 3.

Reinforced Concrete.

material in reinforced concrete beams. After the point has been passed beyond which the concrete cannot be stretched exceedingly minute hair cracks are developed, but so small as to be invisible until the tensile strain of the steel is very considerable. The dimensions of the hair cracks depend upon the modular ratio of the two materials, and if the steel is to be subjected to stresses greater than 17,000 lb. or 18,000 lb. per square inch it is very desirable that the elastic modulus should be greater than the customarily accepted value of 30,000,000 lb. per square inch, otherwise the hair cracks will be correspondingly extended.

For this reason many engineers insist upon the employment of mild steel in preference to high tension steel. Although the width of the inevitable hair cracks is a matter for serious inquiry in the case of engineering structures, especially those in or near water, these invisible cracks are of less importance in building construction, where it may be permissible to use steel that can be safely stressed up to 20,000 lb. per square inch on the basis of 30,000,000 lb. per square inch as the value of the elastic modulus. If steel could be produced with a higher modulus the range of permissible working stress could be extended proportionately.

As to the form of the bars employed, the architect must decide for himself whether to adopt the plain round section obtainable in the open market or one of the various types of deformed bar.

European experts have used plain bars for many years with perfectly satisfactory results, relying upon the adhesion bond existing between the steel and the concrete, and, in some cases, upon the cranking of the bars as requisite in continuous beams and beams with fixed ends. As an additional precaution the ends of such bars are usually split and fish-tailed, or are bent over to J form.

As Professor Turneaure remarks, "America is the home of the patent bar," the object of which is to furnish a mechanical bond, supplementary to the natural adhesion of the materials.

The architect may adopt the general class of bar he prefers without affecting the question of design in any way. But he should at the same time take into account the character and properties of the steel and the nature of the projections intended to provide the mechanical bond.

If the projections occur at intervals in the length of a bar so as to destroy continuity of the metal in the line of the projections the area of steel must be measured on the core of the bar and the projections treated as waste metal so far as concerns resistance to tension.

A bar with gradual swellings and depressions on opposite sides would be a desirable form but for the tendency of the swellings to cause fracture of the concrete by wedge action.

Twisted round bars are effective, and at the same time obviate wasted sectional area because the fibres are continuous throughout. Twisted square bars are not desirable owing to the sharp corners they present.

The question of web reinforcement in beams raises further points for consideration, and has resulted in a fertile crop of patents, most of them relating to special types of reinforcement.

Web reinforcement is primarily intended for resisting tension on diagonal planes in the concrete, and if the stirrups or equivalent members are of uniform sectional area they ought, in the case of uniformly distributed loading, to be disposed at progressively increasing intervals from the supports to the middle of the beam, as dictated by a diagram of shearing force, which serves as a convenient measure of diagonal tension. If the web members are spaced equally their sectional area ought to be varied in accordance with the shear diagram. These points have a direct bearing on the design or selection of web reinforcement, as the case may be.

In systems where the web members are of round rods or flat strips bent to the form of stirrups or links and looped round or clipped to the tension bars the design of web reinforcement is perfectly simple. There are several types of patented reinforcement where the web members are fixed permanently to the tension bars, and in choosing from these the designer should see that facilities are provided for variation of the spacing as necessary.

Columns and Struts.

Reinforced concrete necessarily shows to less advantage in compression members than in beams, for the reasons already stated, and its economy is further reduced by the customary stipulation that the working stress in the steel shall not exceed m times the working stress in the concrete. As the value $m=15$ is now generally adopted the result is that for a column with longitudinal reinforcement and moderately efficient lateral reinforcement the working stress in the steel, even for concrete with the safe resistance of 900 lb. per square inch, is only 13,500 lb. per square inch, or 9,000 lb. if the working stress for the concrete is 600 lb. per square inch.

Special forms of bars for the longitudinal reinforcement are unnecessary, and are not always advocated even by makers of patent bars for beams.

The choice of lateral reinforcement offers greater scope for the judgment of the designer. The proprietors of different systems provide several methods for consideration—hoops, ties, links, and spiral coils of various kinds are recommended, and the designer should consider the merits of these with care, bearing in mind particularly the facilities afforded for moulding and tamping the concrete in successive layers from the bottom upwards, a mode of procedure more conducive to sound work than the practice of pouring the concrete in at the top of a closed mould.

As we have mentioned in previous articles the R.I.B.A. Report and the L.C.C. Draft Regulations put a premium on helical reinforcement, and prefer circular hoops to rectilinear ties. Even if these recommendations are followed the designer still has to judge of the efficiency with which they are carried out in the systems of construction submitted for consideration.

(To be continued.)

REGENT-STREET POLYTECHNIC.—III.

[*Continued from page 677, vol. CI.*]

Fire-Escape Stairways.

THE problem of obviating material loss of light where fire-escape stairs are erected outside the windows of buildings was solved in a satisfactory manner at the new premises of the Regent-street Polytechnic.

In that building there are two stairways of the kind both constructed by the St. Pancras Ironwork Company, Ltd., one in the north and the other in the south light area. Both of them are approximately 12 ft. square in plan, with a square or rectangular well varying somewhat in form and dimensions at different floor levels.

As the architect, Mr. George A. Mitchell, considered it very desirable that the obstruction to light should be minimised as much as possible, the patent reinforced concrete treads which had originally been specified for all the stairs were replaced by perforated iron treads and risers, made in compliance with the requirements of the London County Council, except in one place, where obstruction to light was not an important consideration, and in a few situations where a non-slippery tread was particularly desirable.

Further, most of the landings were constructed on the principle of pavement lights, designed so as to throw as much light as possible on the windows below.

The arrangement is one necessarily involving additional cost, which many owners, who are obliged to provide means of escape in case of fire, may think it well to avoid, but the resulting economy of light secured at the Polytechnic is clearly a consideration which justifies the outlay involved by the application of glazed landings in the case of buildings where abundant light is essential for work.

Sanitary Fittings.

The new sanitary tower, the position of which is shown by the drawings reproduced in a previous article, provides ample accommodation for students and others on the various floors. The whole of the fittings were supplied by Messrs. A. Emanuel & Sons, Ltd., and the plumbing was executed by Messrs. Holloway Bros. (London), Ltd., the general building contractors. The fittings are of white glazed fireclay, and, although generally similar to those employed so largely in the present day, they present some features of which brief mention may be made.

The sink fittings were specially manufactured to suit the space available in the building. The lavatory basins are of the twin type, and are fitted with special press-down valves, most suitable for colleges where considerable waste of water occurs if ordinary screw-down valves are employed. Another feature of the basins is to be found in the fitting of the grids into the overflow of the other basins, thus permitting free access for clearing the waste outlet. The urinals are of the firm's standard pattern, solidly made in fireclay. The closets are in heavy fireclay, fitted with teak seats bolted on. The bath-room, not intended for the general use of students' is of the independent fireclay pattern, and the shower fittings are provided with Emanuel's "Careless" valve, constructed so that the user must keep his hand on the lever as long as water is required.

Throughout the work no unnecessary waste of water can take place, as all the fittings have been designed in view of this contingency. So far as we were able to judge in the course of our recent inspection, the whole of the sanitary work has been executed so as to ensure working efficiency, and the plumbing details by Messrs. Holloway Bros. deserve equal commendation for their neatness and workmanlike finish.

Heating and Ventilation.

This part of the engineering equipment of the Polytechnic building was carried out under great difficulties owing to the fact that the alterations to the old part and the construction of the new portion were completed in sections, so as to provide for the uninterrupted continuance of the work conducted by the institution. In consequence of this programme, the heating engineers, Messrs. Strode & Co., were obliged to install the heating and ventilation systems in the various sections as completed, a mode of procedure which is somewhat inconvenient, as will readily be appreciated by all who have had practical experience of heating and pipe erection work generally.

The medium employed for heating is low-pressure hot water, supplied from three large boilers of the sectional type, but two of these are adequate for the requirement of the building, the third being arranged as a stand-by. For the swimming-bath any one of the three boilers can be utilised.

To ensure rapid and efficient circulation of the water from and back to the boilers the circuits are fitted with Strode's electrically-driven hot-water circulation accellerators, two of these appliances being installed so that one may always be in reserve for use in case of emergency.

Separate circulation mains are run to the different sections of the building, thus permitting any individual section to be shut off independently of the others, this being a very important facility in a building such as that of the Polytechnic, where several sections are only required for use at certain times. The swimming-bath is also served by an independent circuit of flow and return mains.

Heat is distributed in the halls, rooms, and corridors by means of radiators, each fitted with a control valve permitting the regulation of temperature to suit requirements.

The ventilation scheme, also carried out by Messrs. Strode & Co., provides for the supply of fresh air from a central fan of the closed blower type. The air is drawn in through a special filter, and after being purified is blown by way of ducts formed in the brickwork into the various rooms to be ventilated. For the extraction of vitiated air, separate fans of the exhaust type have been provided, the effect of the two systems being to ensure a thoroughly efficient circulation of pure air throughout the entire building. Separate means of regulating the movement of air are included, so that in the event of a large congregation of people in any of the rooms the supply of fresh air can be increased suitably, and, if occasion should arise, the volume of air moved by the fans can be reduced.

Hot-water supplies for domestic purposes are furnished by an independent boiler and cylinder from which circulation mains proceed to all sections of the building where hot-water is required.

Electrical Installations.

The whole of the electrical work was carried out by Messrs. H. J. Cash & Co., Ltd., of Westminster, in accordance with the designs and specification of Mr. R. Borlase Matthews, M.I.E.E., of Kingsway. The work comprises five distinct installations, viz. :—

General Lighting, Public Hall Lighting, Power Circuit, Laboratory and Photographic Circuits, Cooking Circuit.

Current for all the circuits is drawn from the mains of the Marylebone Borough Council, whence leads are taken into the building at a point in Cavendish-place, and connected with a general distribution-board on the three-wire system.

For the information of any of our readers who may be familiar only with the two-wire system, we may explain that the three-wire system can be considered as the combination of two two-wire systems placed side by side with the two inner wires merged into one. The lamps are supplied with current alternately from the positive and negative mains and all the return wires are connected with the inner main. Assuming the positive main to carry current at +200 volts and the negative main to carry current at −200 volts, the potential difference is 400 volts. Then assuming the inner wire to be charged with electricity at earth potential, the difference of voltage between each of the outer mains and the inner main is 200 volts, this being the maximum pressure in the lamp wires. Currents passing along the inner main neutralise each other, and if the load were equally balanced there would be no current in this conductor. The great advantage of the system is to be found in the fact that owing to the relatively high potential between the two outer mains and the small amount of current in the inner conductor, the quantity of copper required is very much smaller than for the conductors in a two-wire system, the theoretical saving of copper being fully 70 per cent. From the main distribution board at the Polytechnic cables are run to seven control boards :—Two for the general lighting, at 240 volts; two for the public hall lighting, at 240 volts; one for the power feeders, at 480 volts; one for the laboratory circuits, at 480 volts; and a three-wire board for the laboratory, photographic, and cooking circuits.

The seven control boards supply the following feeder cables :—

Two 150-ampere feeders for general lighting, carried to a point in the basement, whence rising mains are taken to distribution-boards on each floor.

Three 25-ampere feeders for the public hall lighting terminating on three distribution switch and fuse boards, two of these boards controlling the lighting of the hall, the corridor, and exits, and the third board controlling the lighting of the platform.

Two 20-ampere feeders for the swimming-bath and gymnasium lighting.

Two 100-ampere power circuits at 480 volts for the electricity laboratory, terminating on a distribution-board, whence sub-circuits are carried to supply machinery and apparatus installed in this laboratory.

One 50-ampere power circuit at 480 volts for the electricity laboratory, terminating on the distribution-board mentioned in the preceding paragraph.

One 50-ampere power circuit at 480 volts for the engineering workshops, terminating on a distribution-board, whence sub-circuits are run to supply electric motors operating lathes and other machine tools.

One 15-ampere power circuit at 240 volts also for the engineering laboratory with distribution-board and sub-circuits as above.

Two 100-ampere heat circuits, supplying the kitchen with current for cooking purposes.

Two 50-ampere arc light circuits, supplying current for the lanterns used by lecturers in the chemistry, physics, architecture, engineering, and art departments.

Two 50-ampere circuits, supplying current to the daylight studio.

Two 100-ampere circuits at 200 volts for the photography department.

One 50-ampere circuit at 480 volts for the photography department.

The following electric motors are included in the power installation :—

Two 12-brake-horse-power motors for the lifts.

Two 8-brake-horse-power motors for ventilating fans.

One 5-brake-horse-power motor for ventilating fans.

Two 3-brake-horse-power motors for the Strode accellerators included in the heating installation.

The looped-in system of wiring was adopted throughout the building, a method which obviates the jointing of wires and consequent risk of faults. The greater proportion of the wiring is protected by heavy gauge solid drawn enamelled-steel conduit, erected complete before the floors and walls were finished, the wires having been drawn into the conduits after the floors had been surfaced and the walls plastered.

In lavatories and places where condensation was anticipated the wires were drawn into "Kalkos" tinned-brass tube, with "Kalkos" fittings at all switch and ceiling rose points. The lamps throughout are fitted with Holophone reflectors specially designed to give the best results in the positions where they were placed.

In the Masonic Hall the ceiling enrichment is worked out in masonic designs, outlined with red and blue electric lamps. The conduit work here was very intricate, and had to be executed most accurately to fit the lines of the design.

We are indebted to Mr. Borlase Matthews for permission to publish the foregoing account of this interesting and comprehensive installation.

REINFORCED CONCRETE APPLIED TO BUILDINGS.

At a general meeting of the Leeds and Yorkshire Architectural Society on the 11th inst., held at the Leeds Institute, the President, Mr. S. D. Kitson, F.R.I.B.A., in the chair, an interesting paper was read by Mr. G. C. Workman on "Reinforced Concrete Applied to Buildings." The lecture was illustrated by slides, showing many important buildings already erected and some in course of construction. In the course of the lecture Mr. Workman said :—

"I would explain that as I have been during the past ten years exclusively identified with the 'Coignet System' of reinforced concrete, all the works which I intend to describe to you have been executed in this method, and the reinforcement of the various members has been carried out in accordance with the typical arrangement of the bars, which forms the characteristic of this particular system.

In all the buildings I am about to show you round bars of mild steel have been used in every case for the preparation of the various steel frames or units for the reinforcement of beams and pillars, and the same kind of bars have been used for the reinforcement of the floor slabs, and in certain cases for the walls.

I would mention that the principal reason for using round bars is because they have the advantage of being easily procurable in the open market, and also on account of the fact that this section produces the minimum amount of contact between the various bars forming the steel framework.

It is obvious that flat surfaces of contact between the bars should, as much as possible, be avoided on account of the fact that rust is liable to develop between the surfaces of contact, and this may ultimately become a source of danger to the structure.

Round bars have also the advantage over any other section that they offer a better surface of adhesion for the concrete, which is a matter of great importance in order to ensure the proper working of both the steel and the concrete to resist the external efforts.

In beams the lower or tension bar, which usually varies in diameter between ½ in. and 1⅛ in., is connected to an upper bar ½ in. in diameter by means of vertical stirrups $\frac{5}{16}$ in. or ¼ in. in diameter, passing underneath the lower bar and having their ends hooked over the top longitudinal bar, thus forming a perfect mechanical anchorage between the tensional and compressional areas of the beam. These stirrups are gradually spaced in proportion to the shearing effort, which is greater at the points of support. These stirrups are bound to the main bars by means of strong annealed wire in such a manner that when the unit is suspended into the box-moulding forming the beams the position of these stirrups cannot be altered during the concreting operation, nor is it possible for the lower bars to become pressed downwards in such a manner as to be apparent on the soffit of the beam.

These top longitudinal members have also the advantage that the bars forming the reinforcement of the slabs must pass over them, which makes it necessary to place them in their proper position, namely, in the upper portion of the concrete of the slab above the beams, where they are required to counteract the negative bending moment or contraflexure of the slab.

It is obvious that if the reinforcement of the slab above the beam is not properly kept in position it is liable to be laid flat over the beams so that the upper concrete is not reinforced to resist the bending efforts, and, although this defect may not actually endanger the stability of the slab, longitudinal cracks over the beams are likely to appear in course of time.

The negative bending moment in the beams over the pillars is counteracted by means of joint bars bound by annealed wire to the top members of the unit reinforcement.

The rules of the R.I.B.A. concerning reinforced concrete, which have recently been amended, have added a special recommendation to the effect that precautions should in every case be taken by splitting or bending the rod ends or otherwise to provide additional security against the sliding of the bars in the concrete.

One of the first large buildings with which I had to deal was the second Tobacco Warehouse for the Bristol Docks. This work was carried out under the docks engineer, and the contractors were Messrs. W. Cowlin & Son, of Bristol.

Besides the advantages of fire-resistance and economy which this building offers over the first one, the internal accommodation is larger, on account of the walls being only about 14 in. in thickness throughout the height of the building, instead of the considerable thickness of brick walls required in the first building. These thin brick walls or panels were supported at each floor by lintels, and the building has been divided in two by a partition in reinforced concrete 6 in. thick.

The various floors were arranged in such a manner as to minimise the risk of fire by cutting off any particular floor from the others. The level of the floors is slightly raised at all lift openings and doors, so that it would be possible to flood any particular floor with a couple of inches of water if required. This warehouse has been erected on reinforced concrete piles varying in length between 40 ft. and 50 ft., which were driven into the ground by means of a steam monkey weighing 2 tons.

In the case of several buildings erected at Rainham, Essex, for Messrs. J. C. & J. Field, Ltd. (the architects being Messrs. Scott & Fraser, and the contractors Messrs. William King & Son, of London), the site is situated on the riverside and is extremely marshy, so that the buildings had to be constructed on spread foundations or rafts in reinforced concrete. Although this building contains very heavy machinery and tanks for the manufacture of soap, it has been possible to spread these loads on to the ground evenly, at a rate of only about a quarter of a ton to half a ton per square foot. Reinforced concrete buildings, being monolithic and lighter than brick or masonry work, are very well adapted to cases where unequal settlement is likely to occur, especially when such buildings are erected upon a reinforced concrete raft.

I would mention that there seems to be a considerable difference of opinion between the various methods of stopping the concreting in floor slabs, in beams and in pillars. Personally, I am of opinion that the best method of stopping the concrete of the floor slabs is to stop the work over the beams, because at this particular point the bars of the slab have been brought upwards to take the negative bending moments over the beam, so that the concrete in compression

is underneath, and if a sufficient number of bars have been provided to resist the contraflexure of the slab no cracks should appear, or if such cracks did appear they would not endanger the entire structure, whereas if the break in the concreting operation is in the middle of the slab it is necessary that the face should be left perpendicular, and if by any chance this has not been done there is a risk of the old face and the new sliding over each other, which would have the effect of endangering the strength of the floor. It is also difficult, on account of the meshwork in the lower part of a slab, to carry a perpendicular face right through. The remaining alternative of stopping the concreting in slabs is to do so at about 1 ft. to 2 ft. before reaching the beam at the point where the bending moments change, but here again we are met with the difficulty of making a perpendicular face right through the thickness, on account of the meshwork of the slab.

Concerning the beams, I am of opinion that the best way to stop the concreting operation is at the points of support, for the same reason as I have given in the case of the slabs.

Concerning the pillars, the footings should be made first and the body of the pillar carried up to the level of the soffit of the beams, the remaining portion being concreted at the same time as the beams. The usual practice is to carry out the concreting of the beams up to their point of junction with the slab, and to concrete the slab, which is usually situated above the neutral axis of the beam, after the meshwork has been placed in position on the flat centring.

One of the most interesting buildings with which I have been associated is the new Western District Post Office, which was erected about two years ago under the supervision of the Office of Works, the contractors being Messrs. William King & Son, of London.

This building, which is situated between Cavendish-square and Wimpole-street, comprises a block of 200 ft. frontage and 160 ft. in depth, with basement, ground floor, first and second floors, and flat roof.

Owing to the fact that only four large pillars were allowed in the centre of this floor space, the spans between these pillars and the outer walls varied between 45 ft. and 39 ft., so that the pillars support loads of over 200 tons each.

One of the chief features of the building is that the ends of the principal beams carrying respectively the first floor, second floor, and roof are suspended bodily by means of strong steel stirrups to upper beams 6 ft. high, forming the internal walls surrounding the inner court above the various floor levels. By this means it was possible to obtain a maximum height for the windows, which was a condition stipulated by the Office of Works. This condition, however, brought about a question as to whether this method of suspension could be used without danger, the two beams having a span of 39 ft., and supporting the first floor with a superload of 1 cwt. per square foot, the upper supporting beam having a span of 45 ft. There was no evidence that this particular arrangement had ever been adopted before, at least for spans of such large dimension. I am glad to say that the problem was solved in a satisfactory manner, with the result that the two suspended beams, 39 ft. long each, and the beams across the inner court supporting the skylight appear to have been made in one single span of about 118 ft.

Another noticeable feature is found in the extensive beams, over 12 ft. in height, which carry the other end of the suspended beams. These 12-ft. beams have a span of 45 ft., and it was necessary to provide in them a series of large windows situated below the neutral axis of the beam, which occurs approximately at the level of the first floor.

In this building large areas of flooring were tested, the specification being one and a half times the superload, and the deflection not to be greater than $\frac{1}{750}$ of the span. The deflection recorded in the beams did not, however, exceed $\frac{1}{1,300}$ to $\frac{1}{2,000}$ of the span, and no permanent deflection was noticed.

I would take this opportunity to state that, in my opinion, it is essential to place underneath the beams which are to be tested a few strong emergency props not touching the soffit of the beam by about $\frac{1}{2}$ in. This has the effect of reassuring the men who are carrying on the loading operation, and it also has the effect of preventing any sudden collapse which might be due to unforeseen circumstances.

A very large amount of reinforced concrete work has been carried out during the last two years in Jamaica, including the new Government buildings erected at Kingston, Jamaica, for the Government. The architects were Messrs. Nicholson & Corlette, of London, and the contractors, Messrs. William Cowlin & Son, of Bristol. This large building, which is entirely in reinforced concrete, contains the General Post Office and the Treasury.

In preparing the design the architects had to consider the question of earthquakes, and consequently the foundations of these buildings have been constructed in such a manner as to offer the least possible obstruction to shocks or movements of the ground. The foundation is practically in the form of an immense raft composed of strong slabs and beams, the latter uniting the various footings of the pillars. The superstructure is of the type usually adopted in hot climates with spacious verandahs and colonnades. All the roofs are flat and covered with several inches of gravel.

The making of the steel frameworks, and in fact all the labour, was carried out by natives working under a few experienced supervisors. I am informed that most of the concreting was done by native women carrying the concrete in baskets. The new King's House at Kingston was carried out simultaneously with the building previously described under the same architects and by the same contractors. It contains a large swimming-bath and several remarkably fine dancing and reception halls.

Another large building is at present in course of erection at Kingston for the new Law Courts, under Messrs. Nicholson & Corlette. In this case the contract was secured by Messrs. Mais & Sant, of Kingston, Jamaica. This last-mentioned building will be very similar in appearance to the other public buildings. Needless to say, they have been constructed not only to resist earthquake shocks, but also to resist fire, and you will no doubt remember that a very severe conflagration followed the earthquake which happened in Jamaica many years ago. It is for this reason that practically all the buildings of any importance in Jamaica are at present being constructed in reinforced concrete.

I would like to mention that it has been my experience that architects, and in many cases engineers also, are inclined to specify superloads which are obviously far more considerable than what is really necessary for the requirements of the particular building which they have designed. This is probably due to the fact that in many cases reinforced concrete is a novelty to them, so that by specifying a comparatively high superload they hope to guard themselves against failure of the work. It is well established, however, that any failures which have occurred have been due either to the premature removal of props and centering, or, in a few isolated cases, to faulty design, so that in reality nothing is gained in security by specifying a higher superload than is required.

In giving a few examples of applications of reinforced concrete to schools I may point out that, although it has been stated frequently that reinforced concrete was too expensive a material to be used for buildings of this nature, as a matter of fact it has been and is frequently used for this purpose.

It is noticeable also that reinforced concrete is gradually superseding all other kinds of flooring for hospitals, on account of its fire resistance, and also of its cleanness and economy. The same system of flooring is at present being used for the Maternity Hospital, Leeds, and the new Royal Infirmary at Bristol; it has been used also for the Livingstone Hospital at Dartford and for the National Hospital for Paralysis in London.

Amongst large buildings where this kind of flooring is used at present I may mention the Headingley Training College.

I would conclude by saying that I trust that these few examples of reinforced work have been of interest to you, particularly in showing you how various difficulties in construction have been solved, and if the works I have described to you have had the effect of further strengthening your confidence in reinforced concrete, the object of my lecture will have been fully attained."

ENGINEERING NOTES.

The Municipal Engineering Profession.

At a Western District meeting of the Institution of Municipal Engineers, held at Birmingham on January 18, Mr. Henry Hulse, Borough Surveyor and Engineer, Droitwich, read a paper on "The Institution of Municipal Engineers and its Relation to the Municipal Engineering Profession." The Institution was inaugurated in 1908. In the course of his remarks Mr. Hulse said: "The membership now numbers 712 fully accredited members, eighty associate members, and ninety-five students. Ten districts have already been set up in the British Isles. Examinations have been commenced upon lines which, while being a distinct innovation upon what has been the usual practice, are considered, by those well qualified to express an opinion, to be best suited to present-day requirements, and will undoubtedly be followed by other bodies in the future. These examinations, while making no special call for the crammer, do call for individual initiative, while sound knowledge gained in the ordinary curriculum of the schools, with thorough practical training such as may be gained under an experienced official, will be found to be of more service than the mental gymnastics that have hitherto been necessary in so many examination halls. Let not the slack student think that he will benefit under such a scheme, as it is just the co-relating of theory with practical work in its varied problems in the questions set that will leave him plucked, and discover the student who has made up his mind to understand and grasp the work of the profession in all its many details. . . . Our Institution is at one with other institutions in consolidating the municipal engineering profession, and giving its members reason to think and work along national as well as local lines for the benefit of the entire service."

Blackfriars Bridge.

The City Corporation has just published a historical and statistical report in connexion with the recent widening of Blackfriars Bridge, which is the second bridge at that spot. The first was begun in 1760, opened for foot passengers in 1766, and finally completed in 1769. The present bridge was begun in 1865 and opened by Queen Victoria in 1869. For the widening of the bridge the tender of Sir William Arrol & Co. Ltd.—203,006*l.*—was accepted. This included 3,228*l.*, being the estimated cost of the Embankment subway. The actual cost of the widening and the subway proved to be 197,039*l.*, to which was added 3,560*l.*, being the agreed premium for early completion (178 days, at 20*l.* per day), making a total of 200,599*l.* In addition to the cost of widening there were other expenses to the amount of over 31,000*l.*, including the tramways, or in all, 232,362*l.* Before the widening the total width of the bridge between the parapets was 75 ft.; the present width is 105 ft. The other bridges are of the following widths—London, 65 ft.; Southwark, 42 ft.; Tower, from 48 ft. to 60 ft.; Westminster, 84 ft.; Vauxhall, 80 ft.; Kew, 55 ft.; Chelsea, 45 ft.; Putney, 44 ft.; Waterloo, 42 ft.; Albert, 41 ft.; Battersea, 40 ft.; Lambeth, 31 ft.; Hammersmith, 38 ft.; and Wandsworth, 30 ft.

Strength of Concrete.

In the paper on "Reinforced Concrete Columns," read by Mr. W. C. Popplewell, M.Sc., A.M.Inst.C.E., to the Institution of Civil Engineers, some figures are given which deserve notice by concrete users. The concrete tested by Mr. Popplewell was mixed in the following proportions:—Portland cement, 6½ cwt.; Leighton Buzzard sand, unscreened, 13½ cubic ft.; broken granite, ¼-in. to ¾-in. gauge, 27 cubic ft. This is roughly equivalent to a 1:5 mixture by volume, and might reasonably be expected, in view of previously ascertained data, to give the ultimate compressive resistance of from 3,500 lb. to 4,000 lb. per square inch at the age of three months. Nevertheless the average results obtained by Mr. Popplewell were less than 2,200 lb. per square inch, at the same age, thus showing that the strength of concrete cannot be judged merely by the proportions and quality of the materials used, and emphasising the important influence of workmanship and manipulation in the preparation of this material.

THE BUILDING TRADE.

THE INSTITUTE OF BUILDERS:

ANNUAL DINNER.

THE dinner of the Institute of Builders was held in the Whitehall Rooms, Hotel Metropole, Charing Cross, W.C., on Wednesday, when Mr. James S. Holliday, President, occupied the chair, supported by Mr. W. Nicholson, J.P., Lord Mayor of Leeds; Mr. Gerald C. Horsley, F.R.I.B.A., President Architectural Association; Mr. W. Edgar Horne, M.P., F.S.I., President Surveyors' Institution; Mr. C. W. Ball, President Quantity Surveyors' Association; Mr. J. Arscott-Bartrum, Master Tylers and Bricklayers' Company; and Messrs.

H. H. Bartlett	F. May
E. R. Babbs	W. B Medlicott
E. J. Brown	C. H. Mabey
H. Arthur Bartlett	W. W. R. May
Benj. Bailey	Leo. Martin
Jas. Carmichael	F. G. Minter
J. W. Chessum	F. Messum
A. B. Howard Colls	Ellis Marsland
C. Fitzroy Doll	E. M. May
Peter Dollar	F. M. May
F. L. Dove	W. F. Northcroft
Ar. Dixon	G. Perry Nash
C. Dunch	C. M. Poland
H. England	J. Randall
F. M. Elgood	H. Gray Robbins
C. Frankins	L. C. Randall
A. B. Falkner	L. S. Sullivan
B. I. Greenwood	L. Sunderland
C. J. Gould	— Sopwith
A. Reoch Grant	H. Percy Shepherd
B. P. Greenwood	E. J. Strange
H. S. Greenwood	Edgar Stones
A. W. Gattie	Frank Sherrin
Thos. Gregory	H. H. Turner
L. Horner	A. W. Turnbull
E. J. Hill	C. F. A. Voysey
W. M. Hill	J. B. Whinney
B. Holland	H. D. Searles-Wood
R. J. Holliday	Wm. Willett
H. H. Holliday	J. A. Wallis
E. C. Holloway	Maurice E. Webb
H. T. Holloway	F. A. Wallis
F. Hall	F. E. Wallis
Thos. Hall	Hugh Watkins
A. E. Hughes	W. T. Walker
F. G. Knight	F. Wilkins
C. W. Latter	Sydney M. Young
W. Lawrence	Kenneth Nicholson
Fr. Lane	and
T. Moody	T. G. Costigan, Secretary.
L. J. Maton	

The loyal toasts having been suitably proposed and honoured,

Mr. H. H. Bartlett,

Past-President of the Institute of Builders, proposed the toast of "The Architects and Surveyors," coupled with the names of Mr. Gerald C. Horsley, President of the Architectural Association, and Mr. W. Edgar Horne, M.P., President of the Surveyors' Institution. Mr. Bartlett said one had heard a good deal lately in regard to the responsibilities of architects, and more might be heard with advantage on that interesting and important matter. Perhaps a discussion of the subject would enable architects to realise the responsibilities which had been placed upon the builders—responsibilities which were not perhaps appreciated quite as fully as they might have been. The architect who knew what he wanted and would say it would find many builders able and willing to interpret his wishes and thoughts, and save him much trouble and labour by doing what was, after all, builder's work—such details as finding out prices, etc. The architect was responsible for the artistic part of a building, and by troubling about so much detail he took upon himself more responsibility than there was any need for. The builder was placed in rather an invidious position, because so many people were invited to do so many different works on the building that almost all the builder had to do was to pay the accounts and take the general responsibility. He knew the temptation put in the way of the architect, but he thought a little more confidence might be shown in the builder. He thought that modern architecture had vastly improved, and much of it would bear comparison with the best work of the past. In London architecture there was great variety, much perfection, and much better materials than used to be specified or used. New materials were constantly being introduced, and ferro-concrete was one of them. It might be a difficult material to treat architecturally, but it had come to stay, and he believed that architects would produce with that material buildings which we should not be ashamed of, but, on the contrary, look on with pride. As to surveyors, they were the friendly medium between the architect and the builder. It was true there were quantities and quantities, and there were some which it was impossible to price, but the best surveyors of the day carried out their work specially well. The quantity surveyor was a man who held the balance strictly fairly between architect and builder. He hoped architects would not take upon themselves the responsibilities of surveyors, and that surveyors would not take upon themselves the responsibilities of architects.

Mr. Gerald C. Horsley,

in responding for the architects, said he was sure in the number of business associations and transactions which are every day entered into by busy men of affairs in this country there were none which were more fully based upon honourable dealing and mutual respect than those between the architect and the builder. There were always reasons for every case of friendship or alliance, and in this case the mutual undertsanding to which he referred as existing between architect and builder was founded upon one common desire, viz., that good work shall be done. In that way only could the obligation to the client, who pays for the work, be fulfilled. The hope that they might be able to do good work themselves, and that they might get good work out of others, and that this work might advance the highest interests and well-being of their art, should be the mainspring and motive force of their daily efforts in their respective occupations. It was this desire which impelled them all to do what they could to improve the standard of knowledge and execution in their own craft. He need not remind them that architects had always been actively engaged in trying to ensure a sound education for the workers in their profession. The Association of which he was President had for the whole of its life of sixty-five years maintained a flourishing school for young architects, designed to supplement the instruction they obtained through the apprenticeship system. To be entirely successful their efforts must be unceasing, and he claimed that they were that. Broadly speaking, the Association had two objects in view:—(1) That an architect shall be an accomplished designer, a first-rate artist; (2) that the arts and crafts connected with architecture shall be so flourishing as to ensure the production of fine and noble building. In the attainment of the second of these objects builders did, and could, materially assist. In the workshops of builders, and in their yards, architects were accustomed to find the best work. When they visited them they invariably found the best technical execution. He was certain that all architects were frequently amazed at the perfection of execution which was to be found in builders' workshops. But although this was the case in so many instances, although the excellence of the British workman was well known (there was none better in his opinion), he believed that every man needed help and encouragement in this world, not only to attain and possess "a living wage," but also to produce the best work he is capable of. Assure him that if he fits himself to do this more than the "living wage" will probably be his. Their Institute was, he had no doubt, engaged upon many affairs of importance which were to the advantage and benefit of the craft and to the art of building in this country. Architects viewed that work with the utmost sympathy and interest.

Mr. W. Edgar Horne, M.P.,

after some humorous remarks in reference to architects, said that surveyors and builders were intimately acquainted and brought into close touch with each other, and their relations were of a most friendly character.

Mr. H. D. Searles-Wood

then proposed the toast of the evening, "The Institute of Builders and Its President." In the course of his remarks he said that builders had a grave responsibility in teaching their workmen. The President had done much in this direction, not only in his own workshops, but also at the Brixton School of Building, of which he was the Chairman of Committee. We talk about the newer responsibilities of architects and builders, and the difficulties they had to face, but he doubted whether those responsibilities were greater now than they were in the distant past. In the Laws of Babylon, some 4,000 years ago, the laws affecting builders were very drastic. Mr. Searles-Wood then read some of the onerous conditions imposed on builders, but the underlying principle was the same, *i.e.*, to build well and truly. He congratulated them on having Mr. Holliday as their President, and the Institute in having as their President a gentleman of such wide experience.

The President,

in the course of his reply, said, as regards the Institute, he could not say it had been a brilliant year, although very useful foundation work had been laid in one important matter, viz., in the suggested form of contract between builders and sub-contractors. Efforts had also been made to resuscitate the apprenticeship system, and those efforts had taken tangible shape in the suggested draft of indentures which had been prepared and submitted by his Council to the Educational Department of the London County Council for their co-operation. The evolution or revolution which has taken place in the building trade during the past thirty years had been very great, and one marked change had been the introduction of specialists into building operations of all kinds. And it had therefore been felt that a fair contract for sub-contractors was necessary, based on the form of main contract agreed upon by the R.I.B.A. and Institute of Builders. He trusted the basis of the sub-contract suggested by his Council, and which had practically been approved by the Master Builders' Association and National Federation, might prove to be considered fair by all interested, especially as the idea had been only to ask the specialist to take the same responsibilities, as far as he was concerned, as the builder had in the main contract. He should like to take the opportunity of thanking the members of the Council, and especially the members of the Contract Committee, for the great assistance they had given him in the consideration of these two important matters. As regards the building trade generally, while admitting that trade generally was better, the clouds of depression were still over us, and the competition so unhealthily keen that it was difficult to obtain prices that were remunerative. Many reasons had been put forward as the cause of this depression. Among others, the disturbing legislation especially affecting the

trade, and he daresay we could all go as far as saying that the legislation of the past three years had certainly not been conducive to the best interests of the building trade. But as the Government had large questions to engage its attention for some time, he hoped the building trade would have a rest from legislation for a time, so that it could rest on a firmer basis that at present, when, he hoped, there would be a natural return to a period of its former prosperity.

Mr. Benjamin I. Greenwood
proposed the last toast, *i.e.*, "The Guests," in happy terms, and in remarking on a previous observation—that perhaps the Pyramids had been built by a prophet—he said that, if so, he was afraid that no builder had had anything to do with it.

Mr. Fitzroy Doll
responded, and said that architects deplored the introduction of so many specialists in the building trade. Having referred to the many qualifications necessary nowadays for the architect to possess, he spoke of the effect of recent legislation on the building industry. The prosperity of the country was the prosperity of the building trade, because unless the country was prosperous building could not go on.

THE LONDON BUILDING TRADE.

THE notice given by the London district of the Amalgamated Society of Carpenters and Joiners of demands for increased wages and shorter summer hours has been considered at a meeting of the masters, but no decision, we understand, has been reached. It is expected that the two sides will meet in a conference, but as the men's notices do not take effect till June 8 the negotiations will probably go on for some time before a definite answer is given.

The demands, as has been already stated, are for an increase of wages from 10½d. to 1s. an hour, double pay for overtime, and a reduction of summer hours from fifty to forty-seven a week. The masters consider that the brighter prospects which the building trade is beginning to enjoy after a period of stagnation lasting for five or six years would be checked by such a considerable increase in working expenses. The prosperity of the trade is dependent to a great extent on the enterprise work on speculative lines in the suburbs, which is largely undertaken on borrowed capital. The proportion of failures in the trade in the last few years has been high, and it is pointed out that any substantial rise of wages as would threaten the stability of speculative builders would tend to discourage the flow of capital to the industry. The employers complain, says the *Times*, of being hardly hit by recent legislation, in particular by the Insurance Act and the Workmen's Compensation Act. In addition to the contributions for invalidity insurance, they anticipate a heavy burden in connexion with the unemployment provisions, the building trade being one of the three groups of trades to which this part of the Act applies. Complaint is also made of the uncertainty as well as the weight of the liabilities imposed on builders by recent Finance Acts.

GOVERNMENT CONTRACTS.

THE following tenders have been accepted during the past month by the Government Departments named:—*Admiralty, Works Department:* Works services, landing steps and footway at Oil Fuel Depôt, Turnchapel—Messrs. Steer & Pearce, 8, Carfrae-terrace, Plymouth; new surgery, North-yard, Devonport — Mr. James Crockerell, Richmond-walk, Devonport; officers' cabins, submarine depôt, Haslar—Mr. John Hunt, South Wharf, Cleveland-road, Gosport; workmen's cottages, Torpedo Range, Loch Long—Mr. William Clarke, 43, Sandgate-street, Ayr. *Commissioners of Woods:* Buildings for wood distillation works at Speech House in the Forest of Dean, Gloucester—Mr. Alfred James Dolman, 93, Ryecroft-street, Gloucester; alterations and improvements, Barossa Farm—Mr. J. Corbett, Bagshot. *War Office:* Work services, alterations and additions to Hilsea Hospital—Messrs. G. Munday & Sons, 9, Botolph-lane, Eastcheap, E.C.; alterations and improvements to married quarters, Cahir—Mr. J. Roche, Gladstone-street, Clonmel; annexes to Netley Hospital—Mr. J. Hunt, Gosport; conversion of headquarters, Cardiff—Messrs. Davies & Griffiths, King William-street, Pembroke Dock; erection of civilians' quarters at Tidworth—Messrs. W. E. Chivers & Sons, 29, Sheep-street, Devizes; installation of heating apparatus, Herbert Hospital, Woolwich—Messrs. Ashwell & Nesbit, Ltd., 12, Gt. James-street, Bedford-row, W.C.; installation of heating apparatus, Military Hospital, York—Messrs. J. F. Phillips & Sons, Ltd., Queen Anne's-chambers, S.W.; internal wiring, Louisberg Barracks, Bordon, and married quarters, Bordon—Messrs. G. E. Taylor & Co., 8, Bush-lane, Cannon-street, E.C.; periodical works services at Tidworth—Mr. F. Holdsworth, Shipley, Yorks; reconstruction of No. 3 store, Gunwharf, Portsmouth—Messrs. E. & A. Sprigings, Winstanley-road, Portsmouth; supply and erection of steel stop butts at Rainham—Messrs. J. Westwood & Co., Ltd., Napier-yard, Millwall, E.; surface drainage, Bulford—Messrs. W. E. Chivers & Sons, 29, Sheep-street, Devizes. *India Office; Store Department:* Lavatories—Messrs. Doulton & Co., Lambeth, S.E.; water supply plant—Messrs. J. Simpson & Co., 153, Queen Victoria-street, E.C. *Crown Agents for the Colonies:* Cement—Messrs. Peters Brothers, 72, Victoria-street, S.W. *Office of Works:* Builders' work, extensions, and alterations, Birmingham parcel office—Mr. J. A. Turton, 1, Wheely's-road, Birmingham; children's conveniences at Kensington-gardens—Messrs. F. Webster & Son, Grove Vale Works, East Dulwich, S.E.; land registry extension—Messrs. F. & T. Thorne, Isle of Dogs, E.; Manchester maintenance work—Messrs. Brown & Backhouse, Chatham Works, Chatham-street, Liverpool; erection of new post-office, Rochester—Messrs. T. H. Kingerlee & Son, 35, Queen-street, Oxford; erection of administration block, Royal Scottish Museum—Messrs. J. Lownie & Son, 57, Harrison-road, Edinburgh; extension to Waltham Cross Post-office—Messrs. J. Bentley & Sons, Sun-street, Waltham Abbey; water mains, pipelaying, repairs, alterations, etc., Windsor Castle—Messrs. J. Mowlem & Co., Ltd., Grosvenor Wharf, S.W.; alterations, drainage, Windsor Castle—Messrs. Dent & Hellyer, 35, Red Lion-square, W.C.; marble work, British Museum extension—Messrs. Fenning & Co., Ltd., Palace Wharf, Rainville-road, Hammersmith, W.; National Gallery of Scotland—Messrs. Galbraith & Winton, 185, St. Vincent-street, Glasgow; reinforced concrete work to tank on Duck Island, St. James's Park—Messrs. Holloway Brothers (London), Ltd., Victoria Wharf, Belvedere-road, Westminster-bridge, S.W.; framework and floors, Royal Scottish Museum—Messrs. Loudon & Inglis, Coatbridge. *Commissioners of Public Works, Ireland:* Alterations, Kilkenny Post-office—Mr. T. A. Walsh, Kilmallock.

MAHOGANY AND HARDWOOD.

WE learn from Messrs. Foy, Morgan, & Co.'s London mahogany and hardwood report, 1911, that the total importations of mahogany into London during the last twelve months amounted to about 15 per cent. in excess of the figures for 1910. Although the quantities from several sources of supply show some variation from the shipment of the previous year, the excess is practically owing to the increased importations from the West Coast of Africa. The year closed with a very strong market. The prospect for shippers is encouraging, as there are no indications that the present high prices will fall away in the near future. The importations during the past year of Honduras were almost identical in quantity with those of 1910—to be exact they were one per cent. less. The total importations of African mahogany into London showed an increase of over 60 per cent. as compared with the previous year's total, and the trade during the year reached more important dimensions than for several years past. Unfortunately, however, the increased quantity chiefly came from a district which supplies a very poor quality. In addition to this, the condition of many of the logs generally has been faulty, so that the market has not received sufficient really good logs. Prices have been maintained at an excellent level throughout the year, and all the good logs imported have met with a ready sale at exceptionally good figures. "The teak trade of 1911 presents some peculiar features. The total importations exceed those of 1910 by about 40 per cent. and the increased quantity has consisted largely of logs. While all the sources of supply have contributed to some extent to the increase, by far the most important additional supplies have come from Bangkok. The moderate increase in the plank importations is owing chiefly to the larger import from Rangoon. The deliveries during the year have been disappointing, having declined about 13 per cent. as compared with the total of 1910. . . . So far as logs are concerned, the standard of quality on the whole has not been high. The bulk of the importations has consisted of second-grade parcels, and even some of those which have been brought in as "first class" have left a good deal to be desired in point of condition. . . . The outlook for the near future is difficult to gauge. The present conditions of trade and stocks on this side do not appear to warrant the hope of any advance in values. . . . The bulk of the importations of Kauri pine to the United Kingdom arrived in sailing vessels early in the year, and stocks were more than ample for the slow consumption during the first nine months. A greatly improved demand has existed throughout the last quarter of the year, reducing stocks to a moderate quantity, and enabling holders to advance prices to a slight extent, although not sufficient to bring them to a parity with the increased cost of future supplies. The extraordinary development of the demand in the Colonies during 1910 was more than maintained during the present year, so that very little of the production was available for shipment to the United Kingdom, whilst values have risen considerably at the shipping ports. It appears, therefore, that better prices must be forthcoming in the United Kingdom market in order to attract further supplies of this highly esteemed material. The demand for white pine (Kahikatea) in suitable sizes and conditions is now firmly established, and the consumption has been active during the entire year."

GENERAL BUILDING NEWS.

NEW CHAPEL, NOTTINGHAM.

Messrs. E. R. Sutton and F. W. C. Gregory, of Nottingham, are the architects for the new Baptist chapel and schoolrooms to be erected at the junction of Gregory-boulevard and Sherwood-rise. The chapel will accommodate 500 persons and the schools 400. The estimated cost of the work is about 8,000*l.*

RIDLEY HALL, CAMBRIDGE.

A new block of buildings, to accommodate ten additional students and a tutor, has been built at Ridley Hall, Cambridge. There are now rooms for thirty-nine students. The architect of the new building was Mr. A. W. Wallace (London), and the builder Mr. W. Saint (Cambridge).

NEW SCHOOL, PORT TALBOT.

This new higher elementary school has been erected at a cost of 10,000*l.*, and provides accommodation for 204 children. The building includes a science wing containing a chemical and physical laboratory and lecture-room, and a corresponding wing contains cookery, laundry, and dinner rooms; there is also a large central hall and a manual instruction-room. The architect for the work was Mr. W. James Nash, A.R.I.B.A., the County Architect, and the contract was carried out by Mr. Watkin Williams, builder, of Cardiff.

NEW SCHOOL BUILDINGS, NORWICH.

A large extension of the Norwich High School for Boys has just been carried out from the plans prepared by Mr. E. J. Trench, architect, of Norwich. The new buildings include a large hall, three classrooms, each accommodating one hundred boys, and a chemical and physical laboratory. The heating throughout is by hot water, and the whole school will accommodate about 250 scholars. The contractor for the work was Mr. H. C. Greengrass.

MUNICIPAL TECHNICAL INSTITUTE, CORK.

This new institute was opened last week and has been erected from the designs of Mr. A. Hill, F.R.I.B.A., architect, of Cork, and the contract was carried out by Mr. Samuel Hill, builder, of Cork.

NEW BUILDINGS IN LONDON.

Catholic Church, Eltham; Mr. F. J. Bradford, builder, King Richard-road, Leicester. Rebuilding Nos. 9, 10, and 11, Eagle-street, Holborn, S.W.; Messrs. L. W. Ridge & W. Charles Waymouth, architects, 104, High Holborn, W.C. Nurses' quarters at Constance-road Workhouse, Camberwell, S.E. (2,450*l.*); Messrs. W. J. Mitchell & Son, builders, Dulwich Village, S.E.

NEW INFIRMARY, PERTH.

Great progress is being made in the erection of this infirmary, which is to cost about 36,000*l.* About half of the work has already been completed, including the lodges, admission block, operating theatre, half the corridors, and half the surgical block. The architect for the work is Mr. James Miller, A.R.S.A., of Glasgow.

and the contractors are:—Brickwork, Messrs. J. J. & P. M'Lachlan, Larbert; joiner work, Mr. Robert Hill, Perth; plumber work, Messrs. Munro & Sons, Glasgow; slater work, Messrs. James Buchan & Son, Perth; plaster work, Mr. D. M'Nair, Falkirk; iron work, Mr. W. Hume, Kirkside, Perth; glazier work, Pennycook Glazing Company, Glasgow; heating work, Messrs. G. N. Haden & Sons, Trowbridge; tyler work, Messrs. Allan & Son, Edinburgh.

TRADE NEWS.

Under the direction of Mr. W. C. Hawke, A.M.Inst.C.E., Borough Engineer, Dover, the "Boyle" system of ventilation (natural), embracing Boyle's latest patent "air-pump" ventilators and air inlets, has been applied to the Pier Infants' Council School, Dover.

Double-way, down-draught hospital ward stoves are being supplied by the Royal Doulton Potteries to the Hayley Green Hospital, under the direction of Mr. H. E. Folkes, architect, Stourbridge. Double-way, down-draught hospital ward stoves are also being supplied by the Royal Doulton Potteries to the new hospital extension, Wolverhamtpon, under the direction of Mr. Arthur W. Worrall, architect, Wolverhampton.

The Dutton Isolation Hospital, near Warrington, is being supplied with Shorland's double-fronted patent Manchester stoves and Manchester grates by Messrs. E. H. Shorland & Brother, Ltd., of Failsworth, Manchester.

The Church of England School, Caunton, Newark, has recently been fitted with D. O. Boyd's "Hygiastic" ventilating school grates, supplied by Messrs. O'Brien, Thomas, & Co., Upper Thames-street, London, E.C., and Excelsior Works, South Bermondsey.

In connexion with extensions and additions now being carried out to Messrs. Peek, Frean, & Co.'s premises, at Bermondsey, Messrs. Smith, Major, & Stevens, Ltd., of London and Northampton, have received instructions for the installation of one of their full automatic push-button electric passenger lifts and one large electrically-operated goods lift. Other contracts at present in the hands of the firm are for the Admiralty, for Messrs. Boots' premises at Bath and Derby, for the Swansea General Hospital, and for Messrs. Anderson, Son, & Hedley's new premises, Newcastle-on-Tyne. The firm are also exporting twelve machines to Australia, two machines to Wellington, New Zealand, and six machines to South America.

APPLICATIONS UNDER LONDON BUILDING ACTS, 1894 to 1909.

At Tuesday's meeting of the London County Council the following applications under the London Building Acts were dealt with. (The names of the applicants are given in parentheses):—

Lines of Frontage and Projections.

Bow and Bromley.—Projecting porch and balcony in front of Tredegar House, Bow-road, Bow (Mr. Rowland Plumbe for the Chairman and Governors of the London Hospital).—Consent.

Clapham.—Erection of porches and two-story bay windows in front of three houses on the southern side of Voltaire-road, Clapham (Messrs. H. F. Buchan & Co.).—Consent.

Fulham.—Erection of twenty-three houses on the northern side of Clancarty-road, and six houses on the eastern side of Peterborough-road, Fulham, with two-story bay windows, barge boards and porches (Mr. A. Dawkins for Mr. R. B. Mason).—Consent.

Hampstead.—Iron and glass shelter at No. 50, West End-lane, Hampstead (Messrs. H. B. Oldrey & Sons).—Consent.

Hampstead.—Greenhouse at the rear of Park House, St. John's Wood-park, Hampstead, next to Avenue-road (Messrs. C. R. Lowe & Co. for Mr. E. Gardner).—Consent.

Kensington, South.—Addition in front of No. 23, Pembroke-road, Kensington (Messrs. Story & Co. for Mr. H. Sharpe).—Consent.

Lewisham.—Iron and glass hoods and one-story wooden bay windows to houses on both sides of Arthurdon-street and the northern side of Chudleigh-road, Lewisham (Messrs. W. J. Heath & Sons).—Consent.

Marylebone, East.—Erection of a building on the north-eastern side of Townshend-road, at the rear of No. 21, Avenue-road, Regent's-park (Mr. J. M. Ross for Mr. H. B. Birnbaum).—Consent.

Marylebone, West.—Iron and glass hood at No. 47, Boundary-road, St. John's Wood (Mrs. E. S. Lupton).—Consent.

Paddington, South.—Addition in the basement area in front of No. 26, Norfolk-crescent, Paddington (Messrs. Cleveland & Drysdale).—Consent.

Paddington, South.—Iron and glass covered way in front of No. 51, Porchester-terrace, Paddington (Dr. H. Huxley).—Consent.

St. George, Hanover-square.—Illuminated sign in front of No. 13, Wilton-road, Westminster (Messrs. J. G. Pollett & Co.).—Consent.

St. George, Hanover-square.—Two show cases at No. 13, Wilton-road, Westminster (Messrs. J. G. Pollett & Co.).—Consent.

St. Pancras, North.—Addition at the "Gem Picture Palace," Malden-road and Wellesley-place, St Pancras (Mr. J. Codrington for Mr. A. Letté).—Consent.

St. Pancras, South.—Projecting illuminated sign in front of No. 125, Tottenham Court-road (Messrs. F. Sage & Co., Ltd.).—Consent.

St. Pancras, South.—Projecting clock in front of Nos. 297-299, Euston-road, St. Pancras (Greenwich Time, Ltd.).—Consent.

Strand.—Projecting sign in front of No. 183, Oxford-street (Mr. R. H. Kerr for Messrs. Pownceby & Co.).—Consent.

Strand.—Projecting clock in front of Nos. 14-16, Cockspur-street, Pall Mall (Greenwich Time, Ltd., for the Hamburg-Amerika Linie).—Consent.

Walworth.—Addition to the South London Central Mission on the southern side of New Kent-road, Walworth (Mr. H. Macintosh).—Consent.

Wandsworth.—Erection of buildings on the south-eastern side of Mitcham-lane, Streatham (Mr. J. Harding).—Consent.

Wandsworth.†—Erection of buildings on the northern side of Garratt-lane, Wandsworth (Mr. E. King).—Consent.

Wandsworth.—Wooden bay windows and porches in front of proposed houses on the northern and southern sides of Woodbourne-avenue, Streatham (Messrs. Holliday & Stanger).—Consent.

Woolwich.—Bay windows in front of four houses on the northern side of Glenlyon-road, Eltham-park (Mr. J. J. Bassett for Lord Rowallan).—Consent.

Woolwich.—Porch at a house on the western side of Eaglesfield-road, Woolwich, immediately northward of Foxcroft-road (Messrs. J. E. Edwards & Co. for Mr. T. Brandon).—Consent.

Woolwich.†—Erection of a building upon a site abutting upon the southern side of Green-lane, and the western side of Henley-road, Woolwich (Mr. Bruce Dawson for the Western Electric Company, Ltd.).—Consent.

Width of Way.

St. Pancras, South.—Addition at the rear of No. 37, Howland-street, St. Pancras, to abut upon Howland-mews West (Messrs. H. Holmes & Co. for Messrs. Cleaver Brothers).—Consent.

Width of Way and Lines of Frontage.

Bow and Bromley.—Re-erection of No. 416, Old Ford-road, Bow (Mr. H. Brown for Messrs. R. Smith & Co.).—Consent.

Hampstead.—Addition consisting of a water-closet and petrol store at No. 3, Belsize-place, Hampstead (Mr. W. Willett).—Consent.

Kensington, South.—Additions in front of No. 50, Holland Park-mews, Kensington (Mr. H. E. Church for Mr. A. Moor-Radford).—Consent.

St. George, Hanover-square.—Re-erection of a urinal in Hay's-mews, Charles-street, Berkeley-square, at the rear of the "Running Footman" public-house (Mr. M. T. Saunders for Messrs. Watney, Combe, Reid, & Co., Ltd.).—Consent.

St. Pancras, North.—Projecting buttresses in front of the church of St. Silas on the southern side of Preston-street, Kentish Town (Mr. E. C. Shearman for the Rev. Gordon Smythe).—Consent.

Strand.†—Erection of an oriel window and hood at No. 8, York-buildings, Adelphi (Mr. H. D. Searles Wood for Dr. Wynter Blyth).—Consent.

Lines of Frontage and Construction.

Fulham.—Building of a temporary character at No. 86, Stanley-road, Fulham (Messrs. Wheeler Brothers for Mrs. Roberts).—Consent.

Hampstead.—Motor-car shed at the rear of No. 156, Haverstock-hill, Hampstead (Dr. H. Sanders).—Consent.

Holborn.—Iron and glass shelter over the High Holborn entrance to the Holborn tube railway-station (Mr. W. E. Mandelick for the London Electric Railway Company).—Consent.

Kensington, South.—Temporary wood and iron structure erected on the forecourt of No. 48, Victoria-road, Kensington (Mr. A. de Beaufort).—Consent.

Lambeth, North.—Temporary wooden coffee-stall on the north-western side of York-road, Lambeth (Mr. W. H. Hopton).—Consent.

Lewisham.—Temporary wood, iron, and glass building at No. 132, Arngask-road, Catford, next to Torridon-road (Messrs. Norfolk & Prior for Mr. H. Brown).—Consent.

Marylebone, East.—Temporary wood and iron tool-shed at the entrance to Sussex Lodge, Park-road, St. Marylebone (Mr. W. Chisman).—Consent.

Strand.—Iron and glass shelter at the Tottenham Court-road tube railway-station, Oxford-street (Mr. E. P. Grove for the Central London Railway Company).—Consent.

Wandsworth.—Temporary shed at the rear of No. 87, Mayford-road, Balham, abutting upon the northern side of Fernside-road (Mr. J. R. Coward for Mr. W. E. Bradford).—Consent.

Width of Way and Construction.

Lewisham.—Temporary iron motor and cycle shed at Preston Lodge, on the western side of Trewsbury-road, Lewisham, and re-erection of two sheds at the rear of such house (Messrs. F. & H. F. Higgs).—Consent.

St. Pancras, West.—Three wood and iron buildings of a temporary character on the roof of Nos. 386 and 388, Euston-road, St. Pancras (Messrs. Dunk & Bousfield for Messrs. G. Wailes & Sons).—Consent.

Width of Way, Frontage, and Construction.

Hampstead.—Temporary wooden tool-shed in a garden at the rear of houses on the north-eastern side of Belsize-crescent, Hampstead (Mr. W. Willett).—Consent.

Hampstead.—Wooden building of a temporary character at the rear of No. 33, Belsize-park, Hampstead, next to Belsize-lane (Mr. S. C. Lathbridge for Mr. A. Friedberg).—Consent.

Space at Rear.

Hampstead.—Buildings on the western side of Finchley-road, Hampstead, abutting also upon the northern side of Weech-road (Mr. H. A. Welch).—Consent.

Strand.—Addition to No. 2, Coventry-street, Piccadilly (Messrs. Emden, Egan, & Co., for Mr. Appenrodt).—Consent.

Width of Way and Space at Rear.

Norwood.—Five buildings with bay windows on the eastern side of Lyham-road, Brixton (Mr. H. Macintosh).—Consent.

Width of Way, Space at Rear, and Alteration of Building.

Southwark, West.—Alterations at No. 2, Sumner-street, Southwark (Messrs. P. & G. Geen for Messrs. Moore & Sons).—Consent.

Space at Rear and Projections.

Norwood.—Three houses on the northern side of Dane-avenue, Denmark-hill, eastward of Finsen-road (Mr. E. B. Ellis for Mr. H. A. Sargeant).—Consent.

Space at Rear and Alteration of Building.

Norwood.—Alterations at Nos. 2 and 2A, Upper Tulse-hill, Brixton (Mr. R. Milnes).—Consent.

Working-class Dwellings.

Deptford.—Erection of blocks of dwelling-houses, intended to be inhabited by persons of the working classes, upon a site on the eastern side of Brookmill-road, Deptford (Mr. E. Cannell).—Consent.

Deviation from Certified Plans.

Hammersmith.—Erection of Nos. 7 and 9, The Broadway, Hammersmith (Messrs. Hall-Jones & Cummings).—Consent.

St. George, Hanover-square.—Re-erection of No. 25A, Belgrave-square (Mr. F. W. Foster).—Consent.

Separation and Alteration of Buildings.

St. George, Hanover-square.—Alterations at No. 3, Arlington-street, St. James (Messrs. Daniel Smith, Son, & Oakley for Messrs. Crawley, Arnold, & Co.).—Consent.

Formation of Streets.

Norwood.—Roadway of a proposed street for carriage traffic, to lead from Cornwall-road to St. Saviour's-road, Brixton (Messrs. E. Evans & Sons).—Consent.

Buildings for the Supply of Electricity.

Bermondsey.—Steel platform adjacent to the boiler-house at the Neckinger electricity generating-station, Spa-road, Bermondsey (Mr. R. J. Angel for the Bermondsey Metropolitan Borough Council).—Consent.

Finsbury, East.—Steel gantry for a travelling crane at the electricity generating-station, Graham-street, City-road (Messrs. Babcock & Wilcox, Ltd., for the County of London Electric Supply Company).—Consent.

Cubical Extent.

Bow and Bromley.—Additional cubical extent at the premises of Messrs. Bryant & May, Ltd., Fairfield-road, Bow (Messrs. Holman & Goodrham for Messrs. Bryant & May, Ltd.).—Consent.

Chelsea.—Additional cubical extent in respect of additions and alterations to blocks 1, 2, A and B, of Harrod's Stores, Ltd., Basil-street and Hans-crescent (Mr. C. W. Stephens for Harrod's Stores, Ltd.).—Consent.

City of London.—Formation of an opening between Nos. 17 and 19, Carter-lane, City, at the third-floor level (Mr. E. Stones for Mr. G. Buchner).—Consent.

Kensington, South.—Additional cubical extent in respect of additions and alterations at the block of Harrod's Stores, Ltd., at the corner of Basil-street and Hans-road, Kensington (Mr. C. W. Stephens for Harrod's Stores, Ltd.).—Consent.

The recommendations marked + are contrary to the views of the Metropolitan Borough Councils concerned.

PROJECTED NEW BUILDINGS IN THE PROVINCES.*

ABERDARE.—Premises, Gadlys-road, for the Aberdare Co-operative Society.

Aberdeen.—Extensions to Ashley-street School (7,000*l.*); Mr. J. A. O. Allan, architect, 5, Union-terrace, Aberdeen. Church halls, Albion-street Congregational Church (2,200*l.*); Mr. G. Wilson, architect, 181A, Union-street, Aberdeen.

Amesbury.—Police-station; Messrs. Parsons Brothers, builders, Westbury.

Bingley. — Proposed swimming bath and laundry (3,000*l.*); Mr. H. Bottomley, Surveyor, Bingley Urban District Council.

Blyth.—School; Messrs. Robson & Waddle, builders, Blyth.

Bradford.—Tuberculosis dispensary (1,180*l.*); Mr. R. G. Kirkby, Architect, Town Hall, Bradford.

Bristol.—Relief-station, Netham-road; Mr. J. J. Simpson, Clerk, Bristol Board of Guardians, Osborne House, Cotham Park, Bristol.

Brovanmill.—Extensions to Anchor Chemical Works for Messrs. Hope, Ltd. (2,150*l.*); Mr. A. W. McDonald, 219, Hope-street, Glasgow.

Cardiff.—Central fire-station, Newgate-street (15,000*l.*); Mr. William Harpur, Surveyor, City Hall, Cardiff. Cold storage warehouse at Docks (40,000*l.*) for the Cardiff Railway Company.

Chelmsford.—Council offices, Waterloo-lane (2,200*l.*); Mr. J. Dewhirst, Surveyor, Chelmsford Rural District Council.

Chertsey.—Twelve houses (150*l.* each); Mr. H. Beeney, Surveyor, Chertsey Rural District Council.

Chorley.—Branch premises, Mayfield-road, for the Co-operative Society.

Christchurch.—Additions, infirmary (2,200*l.*); Mr. C. W. Ball, architect, Whittington-chambers, King's-road, Southsea.

Cockburns Path (Berwick).—School (3,000*l.*); Messrs. Gray & Boyd, Scotts-place, Berwick-on-Tweed.

Darwen.—Kiosk and villa, Darwen Park (2,100*l.*); Mr. F. E. Seville, Council Offices, Darwen.

Devizes.—Police-station; Messrs. Parsons Brothers, builders, Westbury.

Doncaster.—Lecture hall, etc.; Mr. C. Stevenson, 6, St. Vincent-avenue, Doncaster.

Dunfermline.—Proposed showroom, workshops, etc., Canmore-street (700*l.*); Mr. A. Waddell, Gas Manager, Town Hall, Dunfermline.

Exmouth.—Church institute (3,000*l.*); Mr. G. H. Fellowes-Prynne, architect, 6, Queen Anne's-gate, S.W.

Fence Houses (Co. Durham). — School 9,000*l.*); Mr. W. Rushworth, Architect, Shire Hall, Durham.

Ferryhill.—School (6,500*l.*); Mr. J. A. O. Allan, architect, 5, Union-terrace, Aberdeen.

Garstang.—Isolation hospital (1,457*l.*); Mr. J. Cook, Surveyor, Garstang Rural District Council.

Glasgow.—Extensions to Saracen Tool Works for Messrs. A. Mathieson & Sons (6,000*l.*); Mr. A. T. Millar, 12, Renfield-street, Glasgow. Proposed extensions to City-chambers; Mr. A. B. M'Donald, City Engineer, Town Hall, Glasgow.

Greenock.—Baths and washhouses (5,000*l.*); Mr. J. Low, Master of Works, Burgh Buildings, Greenock.

Grimsby.—Paper mill for Messrs. Dixon & Son, Sheffield.

Halstead. — Proposed public baths; Mr. W. A. Nicholson, Surveyor, Halstead Urban District Council.

Haslingden.—Catholic school (3,000*l.*); Mr. H. Fielding, architect, 2, Beaconsfield-street, Haslingden.

Heywood.—Cooper house, Green-lane, for the Phœnix Brewery Company, Ltd.

Holbeck (Leeds).—St. Francis' Catholic School (3,000*l.*); Messrs. Simpson & Son, 12, Cunliffe-terrace, Manningham, Bradford.

Holsworthy.—Masonic hall; Mr. A. Ross, Heard Bridge, Cornwall.

Honiton.—St. Michael's Church; Mr. C. E. Ponting, architect, Marlborough. Additions, workhouse; Mr. W. Redfern, Honiton, Devon.

Huddersfield.—Yeomanry headquarters, Fitzwilliam-street (7,000*l.*); Mr. W. Cooper, architect, 4, Kirkgate-buildings, Kirkgate, Huddersfield.

Huntwick-with-Foulby.—School (2,500*l.*); Mr. W. V. Dixon, Secretary, Education Committee, West Riding of Yorks County Council, Wakefield.

Inverness.—Science and art school for the Royal Academy (8,000*l.*); Mr. R. I. McBeth, Queen's House, Inverness.

Leagrave. — School; Messrs. Gotch & Saunders, architects, Bank-chambers, High-street, Kettering.

Limerick.—Additions, workhouse infirmary (2,500*l.*); Mr. W. Rosengrave, architect, 33, Catherine-street, Limerick.

Macclesfield.—Structural improvements at Infirmary; Architect, care of the Governors.

Margam.—Twenty-six houses; Mr. J. Cox, Surveyor, Town Hall, Margam.

Montrose. — Flax warehouse (600*l.*), for Messrs. J. & G. Paton, Ltd.

Moorthorpe.—Sunday-school; Vicar, South Elmsall Paris Church.

Mossley.—School (360 places); Mr. R. H. Buckley, Surveyor, Mossley Town Council.

Netherton (Dudley). — School (5,280*l.*); Messrs. Willetts & Sons, builders, Bowling Green, Old Hall, S.O., Staffs. Alterations to school (560*l.*); Mr. W. Deeley, builder, New-road, Cinder Bank, Netherton.

Newcastle.—Additions to Gorforth Church; Messrs. Hicks & Charlewood, architects, 67, Westgate-road, Newcastle.

Newsham (Northumberland).—Picture hall; Mr. J. N. Fatkin, 1, St. Nicholas-buildings, Newcastle.

Normanton.—Baths and washhouses (4,000*l.*); Mr. A. Hartley, Council Surveyor, Normanton.

Nuneaton.—Cooking and handicraft centres, Coton-road (3,390*l.*); Mr. T. Smith, builder, Wheat-street, Nuneaton.

Port Sunlight.—Schools; Mr. H. Beswick, County Architect, Chester.

Radcliffe.—Warehouse and office, Hope Mill, for Messrs. J. C. Hamer, Ltd.

Reading.—Hospital; Messrs. Webb & Sutton, architects, Market-place, Reading.

Renfrew.—Extensions and alterations to Municipal-buildings (3,000*l.*); Mr. John Arthur, architect, 131, West Regent-street, Glasgow.

Saddleworth. — Housing scheme (60,000*l.*); Mr. J. H. Reynolds, Surveyor, Saddleworth Urban District Council.

St. Asaph.—Casual wards; Mr. James Hughes, architect, Denbigh.

Skegness.—Cottage hospital (3,000*l.*); Mr. F. J. Parkinson, architect, 9, Richmond-terrace, Blackburn.

Southsea.—Improvements at St. Jude's Church (2,500*l.*); the Vicar.

Stalybridge.—Additions to Ray Mill for the Victor Mill, Ltd.

Stockport. — Extensions to police-station buildings (10,000*l.*); Mr. C. T. Taylor, 10, Clegg-street, Oldham, and Mr. G. Brady, St. Peter's-gate, Stockport, joint architects.

Swansea.—Extensions to electricity works (4,500*l.*); Mr. C. A. L. Prusmann, Electrical Engineer, Town Hall, Swansea. The following plans have been passed:—Alterations, Dot Café, Rutland-street, for Messrs. R. E. Jones, Ltd.; additions, Printing Works, Fisher-street, for Messrs. E. Davies & Co.; three houses, Gorse-road, for Mr. David Williams; five houses, Pinewood-road, for Messrs. J. B. Jenkins & Sons; alterations, Jersey Arms, Bonymaen, for Messrs. Hancock & Co.; rebuilding Castle Stores, Castle-street, and twelve houses off Middle-road, for Mr. C. Gustavus; four houses and shops, Penfilla-road, for Mr. D. Ludwig. A plan has been lodged for four houses, Uplands, by Mr. E. Evans.

Trowbridge.—School (5,000*l.*); Mr. G. Powell, County Hall, Trowbridge.

Waltham Cross (Herts).—School (4,940*l.*); Messrs. Willmott & Sons, builders, 80, Walsworth-road, Hitchin.

Warsop.—Seventy-five houses for the New Hucknall Colliery Company.

Wellingborough.—Schools (6,672*l.*); Messrs. Henson & Son, builders, 149, Midland-road, Wellingborough.

Wombwell.—Baths, Hough-lane (6,000*l.*); Mr. W. Quest, Surveyor, Town Hall, Wombwell; architect to be appointed.

Worth.—Additions to Prince's Golf Club House, Sandwich Bay; Mr. E. W. May, architect, Sandwich.

Wortley (Leeds).—Clothing factory and laundry; Mr. J. P. Kay, The Lodge, Town-street, Bramley, Yorks.

Wrexham.—Church; Messrs. Protheroe & Co., architects, 13, The Promenade, Cheltenham; Messrs. Collins & Godfrey, builders, The Cross, Tewkesbury.

Yarmouth.—Additions to infirmary; Mr. F. Burton, Clerk, Board of Guardians, Yarmouth.

* See also our list of Competitions, Contracts, etc., on another page.

FOREIGN AND COLONIAL.

Labour in the Colonies.

From the Emigrants' Information Office, 31, Broadway, Westminster, S.W., we learn that all emigrants to Canada must fulfil the requirements of the Canadian Government as to possession of sufficient travelling money, guarantee of employment, etc. There is at present a surplus of unskilled labourers in many parts.—In Sydney and suburbs, New South Wales, the building, iron, and furniture workers have been well employed; and stonemasons, bricklayers, brickmakers, carpenters, sawyers, and able-bodied labourers are in great demand. It is reported that immigrants have difficulty in finding housing accommodation in Sydney. The strike of ironworkers at Lithgow continues. In country districts employment is generally plentiful.—In Victoria employment continues to be very good; and assisted passages are now being granted to mechanics in addition to other persons. There is a large demand for generally useful men, bricklayers, carpenters, plasterers, boilermakers, blacksmiths, moulders, engine fitters, plumbers, turners, and furniture makers.—In South Australia work of nearly all kinds is plentiful, and there is a good demand for bricklayers, plasterers, carpenters, first-class painters, plumbers, tinsmiths, boilermakers, ironworkers, and coppersmiths.—In Queensland there is a good demand for labour generally, both in towns and country, especially in the building and kindred industries.—In New Zealand the demand for mechanics is not so general, but skilled men, such as plumbers, bricklayers, painters, plasterers, and building trade labourers are wanted in many places; skilled labourers in Otago are fully employed, but there is much industrial unrest.—In the Union of South Africa employment in the building and other trades in Johannesburg continues fairly active; but the supply of men is quite sufficient, and in the case of carpenters and boilermakers is excessive. In the Cape there is a marked increase in the amount of employment at Cape Town available for artisans and labourers, and there is a demand for a few masons in the stone-dressing industry, a few cabinet-makers, a few joiners, and a few sheet-metal workers. Otherwise there is no general demand for more labour in the Union.—The employment by the Isthmian Canal Commission of skilled labourers, clerks, and other high-grade employees is now restricted to American citizens, except in cases in which American labour of the character required is not available. There is a surplus of skilled and unskilled labour on the Isthmus, and as the Canal Works are now within measurable time of being completed it will soon be necessary to reduce the number of men employed.

Council Offices, etc., Austria-Hungary.

The following notices are taken from the *Zentral-Anzeiger für das öffentliche Lieferungswesen* (Vienna) of January 11:—The municipal authorities of Vienna have approved the plans for the erection of new council offices in the 13th District at a cost of 950,000 kronen (nearly 40,000*l.*).

The municipal authorities of Pécs (Hungary) have (1) ear-marked a sum of 1,500,000 kronen (62,500*l.*) for the carrying out of city drainage works; (2) authorised a call for tenders for the erection of a central electric generating-station; and (3) arranged for the fitting of water-pipes to 1,500 dwellings.

Works in Servia.

The *Zentral-Anzeiger für das öffentliche Lieferungswesen* (Vienna) of January 11 states that, in connexion with the construction of a new harbour at Prahavo, proposals have been made for the construction and provision of the following:—Quay walls, thirty-eight concrete bridges, water works, streets, fire-stations, electric-light installations, life-saving apparatus, dock railways, landing-stage, restaurant, station, workmen's dwellings, hotel, post and telegraph office, and locomotives.

THE SURVEYORS' INSTITUTION:

"AN EVENING IN THE INSTITUTION LIBRARY."

AT the ordinary general meeting of the Surveyors' Institution, held on Monday, January 22, Mr. Julian C. Rogers (honorary member and late Secretary) read an interesting paper, entitled "An Evening in the Institution Library." In the course of a long but highly entertaining paper—a witty and amusing paper indeed—he said:—

"There is a class of book undeserving of the smallest mercy in a library like ours. I refer to the obsolete or even obsolescent text-book. Theoretically a library like ours should, I suppose, be strictly limited to professional text-books. I am profoundly thankful that this narrow view has not been suffered to prevail. I have known libraries of the kind. They are the most dismal spots on earth.

The staple of our library is British topography, and our collection of these noble works would be hard to match elsewhere. Shall I be thought lacking in appreciation of them when I avow my ability to understand why topography should be regarded as of such surpassing and peculiar interest to surveyors, for, I say it without hesitation after an experience of thirty-six years, there is no class of book in the library less frequently consulted by the members. Whatever might be the appropriateness of topography, there could be no manner of doubt as to the claims of agriculture, historical and technical, ancient and modern, to a place on our shelves, and it figures there to a satisfying extent. Professional text-books also, as a matter of course. There is no lack of them.

As I have said, British topography forms the staple of our collection—in value, not number. The earliest county history is Lambarde's "Kent," of which we possess an excellent reprint, dated 1656—that is two years after its first publication. We have also a copy of Kilburne's "Kent," published in 1657, three years after Lambarde's work, to which it is inferior in every way. Sir William Dugdale's masterpiece, "The History of Warwickshire," was published about two years after Lambarde's "Kent," but there is no comparison between the two authors. Lambarde was an ignorant amateur, Dugdale a professional antiquary and a literary craftsman of the first order of excellence. His work is the model on which all subsequent county histories have been fashioned. We possess a copy of the original edition of this famous book. It is enriched with many plates by the celebrated engraver Hollar, who also contributed many illustrations to the same author's *magnum opus*, the "Monasticon," of which we possess a fine, though not an original, copy.

Let me commend to your notice J. T. Smith's "Antiquities of Westminster," a most delightful book. It abounds especially in admirable illustrations—among them contrasted views of the so-called Painted Chamber of Westminster Palace. The first of them represents the very earliest attempt in the art of lithography, the second the improvements of the art in a later stage of its development. It also shows, on No. 6 of the supplemental plates, an admirable ground plan of Old Whitehall Palace before the fire.

Another book which should by no means be overlooked is Parton's "History of the Parish of St. Giles." Apart from its literary merit, it is of interest from a plan showing, in detail, all the houses and the names of their occupants or owners in the year A.D. 1300. I believe this to be the earliest plan of the kind in existence.

One of the strangest topographical works ever produced is the "Polyolbion" of Michael Drayton, described on the title-page as "A chorographical description of the tracts, rivers, mountains, forests, and other parts of Great Britain." It was published in 1613. Drayton is the "Tusser" of topography, except that his verses are of a higher order of poetical merit, in which the personification of inanimate objects bears a conspicuous part, after the fashion of the period. There is nothing like it in the language. A lyrical Bradshaw or Euclid in hexameters would seem very little more strange to modern eyes. The book is annotated by John Selden.

Those who care for early chronicles should look at our copy of the magnificent volume of Reports of the Record Commission, published under the title "Monumenta Historica Britannica." Here you will find the oft-quoted "Chronicle of Bede" (*circa* 673-735), "venerable," if anyone ever deserved the title, and the "Anglo-Saxon Chronicle," printed in English and Anglo-Saxon in parallel columns—most interesting for those who care to achieve some knowledge of the rudiments of our native tongue, and very useful for students of the much-neglected poet Gower in his last, or English, period. The volume also contains a most instructive map of Roman Britain.

Let me call attention to Fitzherbert's "The Boke of Husbandry," a copy of which, in black letter, dated 1534, is in the library. Thirty years after Fitzherbert came Thomas Tusser's rhymed jingle called "Five Hundred Points of Good Husbandry."

I believe that we own a complete set of Young's writings. They can still be read with profit, though he belonged to that curious class of men competent to advise others in a business in which they are themselves dismal failures.

Of the writings of William Cobbett, Young's successor as an annalist, we possess nothing but his immortal "Rural Rides," which is almost a classic in the language. There is an indefinable charm about the book. It seems to exhale the very air of the breezy downs and sequestered lanes he loved so well.

The principal charm of our library consists in a number of miscellaneous books which cannot be grouped under any general heading.

I am happy to say that we possess a copy of the original edition of Samuel Johnson's dictionary. We are also the possessors of a good copy of Bayle's great historical and critical dictionary—a miracle of learning and research.

We have but two recognisable books from Beckford's celebrated library at Fonthill. One of them, the "History of Framlingham," the other a small guide to the city of Hereford. We are not very rich in books on architecture, perhaps rightly so, but I should like to direct your attention to two of them—Wren's "Parentalia" and Pugin's "Contrasts."

The "Parentalia" is a history of the family of Sir Christopher Wren, written by his son, the second Sir Christopher. Wren was not only a great architect (perhaps the greatest since Bramante), but a great scientist, for he was Savilian Professor of Astronomy in the University of Oxford and a President of the Royal Society. On page 274 is a most interesting account of a survey of St. Paul's Cathedral, made by Wren a few months before the Great Fire in 1666. This should be read in connexion with a report by him after the fire, which will be found on page 247 in Elmes' admirable biography of Wren, also in the library.

A. Welby Pugin's "Contrasts" strikes one at first as an ill-natured pictorial skit on contemporary architecture. It is not really so, being only an appeal to the eye against the degradation of his beloved art. His plan is to place side by side modern and ancient examples of buildings for similar purposes, very much to the disadvantage of the former. I have heard it said by those who knew him that this great artist never used a T-square, and rarely supplied the builder with a working drawing, the poor man having to content himself with rough sketches in charcoal, on the nearest plane surface available.

Let me call your attention to a little "History of Newcastle-upon-Tyne" for the sake of its frontispiece, an undeniable product of the burin of Thomas Bewick, recognisable at once, by the instructed eye, by the masses of uncut wood left to form the deeper shadows.

We have a copy of the third edition of the admirable itinerary (1534-1542) of the learned John Leland—that prince of antiquaries. The book was written to form a New Year's gift to King Henry VIII.

It will be observed that Leland's travels covered the exact period of the suppression of the greater monastic houses, and it is a thousand pities that his commission to explore their records did not extend to their acquisition, so preserving them from destruction by accident or design in those nefarious times.

Of road books we have some excellent examples. The Roman roads appear in detail in Reynold's "Iter Britanniarum." It contains an excellent map of the Roman roads in Britain.

We have also another road book (engraved text and illustrations on 100 copper plates, a most costly production), entitled Ogilby's "Britannia," which was the direct predecessor of Patterson's well-known book.

Patterson's "Roads of England and Wales," published in 1771, enjoyed an extraordinary popularity and passed through many editions. It was in immense demand in the pre-railway times. We have a copy, dated 1784, of the sixth edition, and another copy greatly enlarged by Mogg, which came out just before the disappearance of the mail-coaches. The advent of the automobile has given the book a new lease of life, and it is again in great request.

There is a queer book in the library, published in 1653, entitled "Mattheus de Auctionibus," which, being interpreted, is "Matthew on Auctions."

In order that the fact may be on record I may here state that this very house in which we are assembled has a literary history of its own. Here it was, at No. 13, Great George-street, incorporated in our building, that John Wilkes, patriot, buffoon, and libertine, wrote the famous No. 45 of the "North Briton," and from which he was dragged to imprisonment in the Tower. What is now known as the "Members'" Room on the ground floor was his dining-room, and I have no doubt that its beautiful chimneypiece dates from his time.

We have a complete set of the excellent photo-lithographic reproductions of "Domesday Book" (or "Inquest," as it is more properly called), published by the Ordnance Survey authorities. Its interest is greatly enhanced by a previous perusal of an excellent treatise on it by Mr. Adolphus Ballard, which is also in the library.

Francis Grose's "Antiquities of England and Wales" in eight folio volumes is formidable reading, and more useful for reference than perusal.

No reasonable person can expect our library to be used, say, like the library of the Athenæum Club—for very few of our members can be numbered (or, for that matter, would care to be numbered) among the leisured classes. Practically there are but two periods in the life of an ordinary man when methodical reading is possible—the period of youth and the period of late middle life.

Needless to say, what is read in youth is of incalculably greater benefit than what is read in maturer years, if read properly and on a systematic plan; otherwise it is time absolutely wasted, for there is an art in reading as there is in writing or speaking.

The Institution is still young, as institutions go. The composition of the membership has undergone great changes in the last forty years without losing its basal form in relation to the great landed interests. It has attracted to its ranks in large numbers the important class of building and quantity surveyors, valuers, as distinguished from the stewards of country estates, sanitary surveyors interested in ventilation, drainage and sewage disposal, municipal surveyors concerned with paving, sewerage, road making, and water supply. The literary needs of all these classes of practitioners have had to be catered for, with the result that the library is what it is—a storehouse of information in which every reasonable practical want is fairly, if not fully, provided for.

But there is, beyond this, a larger question which, as it is treading on delicate ground, a former Vice-President shall voice for me.

How many are there still living who remember, as I do most vividly, a paper read before this Institution forty-one years ago, by the late Mr. Jeremiah Mathews, entitled "A Plea for Culture in the Profession of a Surveyor"? He pointed out (what is true) that at the beginning of his career (say, about 1820) "the modern surveyor was unknown . . . occupying a simply subordinate position." He adds: "It is well to be reminded of this . . . in order that we may be impressed with the necessity for

Alterations to "Underhills," Bletchingley, Surrey: The Staircase Hall.
Mr. R. P. Oglesby, Architect.

an expansion of our education and culture." Again he says: "I consider the best preparation for our profession to be a high general education . . . such as is generally thought necessary in the older-established professions . . . and I know of no place comparable to the universities for this purpose."

This is the road which the Institution is now treading, but, as it is open only to a few, might it not be well to place further self-educational facilities within the reach of our students by the inclusion of a considerable number of works of general literature in the lending library, and by encouraging the younger men to attend the classes in History and English Literature, held at King's College, and in many of the provincial universities?

This we can place to our credit—that we were the very first of the modern professions to adopt the examination system, previously confined to the older so-called liberal professions. Our example has since been followed by the architects, the engineers, the accountants, and many other bodies, showing how correctly we interpreted the spirit of the age."

PROTECTION AGAINST FIRE, HAMPTON COURT.

A scheme of fire protection is now being carried out at Hampton Court Palace. The work of laying new water mains which are to furnish a high-pressure supply has been begun by the Metropolitan Water Board, who are carrying a 15-in. main from the Flower Pot Gate in the Hampton Court-road right along the main walk in front of the Palace. From this large main there will radiate several 9-in. mains, while 4-in. distributing pipes will convey the water to all parts of the buildings. A system of electric fire alarms will enable communication to be made with the Palace Fire Brigade.

THE LONDON COUNTY COUNCIL.

THE first weekly meeting of the London County Council after the recess was held on Tuesday in the County Hall, Spring-gardens, S.W., Mr E. White, Chairman, presiding.

LOANS.—The Bermondsey Borough Council is to receive a loan of 2,782*l.* for electricity undertaking. A loan of 2,650*l.* is to be made to the St. Marylebone Borough Council for electricity undertaking, and 2,500*l.* to the Wandsworth Borough Council for the purchase of land for use as a slop shoot.

HOTEL CECIL.—Mr. E. Keynes Purchase has submitted drawings showing a proposal to provide a winter garden in the courtyard at the Hotel Cecil, Strand.

THEATRES, ETC.—The following drawings have been approved by the Theatres and Music Halls Committee:—Broadway Theatre, Deptford—provision of cinematograph chamber; Caledonian-road Baths—provision of cinematograph chamber; Grand Casino (Terry's Theatre), Strand—provision of two water-closets; High-street, Notting Hill (Electric Palace)—provision of a rewinding room; His Majesty's Theatre—adaptation of certain rooms in the basement as property rooms; New Prince's Theatre, Shaftesbury-avenue—arrangement of stage switchboard, arrangement of the seating at the area level, and the provision of balconies at the back of the circle and gallery; Palace Theatre of Varieties, Shaftsbury-avenue—amended arrangement of cinematograph enclosure; Shaftesbury Theatre, Shaftesbury-avenue—construction of a manager's office in a disused painting gallery; Shepherd's Bush Empire—alterations to the gallery.

COUNTERS-CREEK SEWER.—The apron at the river outlet of the Counters-Creek sewer is to be repaired, and the estimated cost of the work is 1,500*l.*

ALTERATIONS TO "UNDERHILLS," BLETCHINGLEY.

TO OBTAIN the staircase hall, which is the subject of our illustrations, the central portion of the house was practically gutted. The principal and also secondary stairs had to be so designed as to pick up mezzanine floors.

The whole of the flooring, staircase, and panelling was executed in wainscot oak, the walls above being white with stuc masonry quoins.

The insertion of an old eight-day clock, its brass dial flush with the panelling, is thought to be a novel feature.

The alterations also comprise new library, boudoir, kitchen offices, and maids' rooms. The architect was Mr. Robert P. Oglesby, of George-street, Hanover-square, W.

TRIBUNAL OF APPEAL UNDER THE LONDON BUILDING ACT.

THE Tribunal sat at the Surveyors' Institution on Monday to consider further the appeal by Messrs. William Gilbert Allen & Henry George Norris against the certificate of the Superintending Architect of Metropolitan Buildings defining the general line of buildings on the western side of Fulham Palace-road between Bishop's Park-road and Brandenburgh-road. Mr. H. Courthope Munroe and Mr. Clarke appeared for the appellants, and Mr. Macmorran, K.C., and Mr. Daldy represented the London County Council. A report of the first hearing, which covered the case of the appellants, appeared in last week's *Builder*.

Mr. Macmorran opened the case for the respondents, and contended that the general line of buildings as fixed by the Superintending Architect was the correct line in the circum-

stances of the case. If they were dealing with the case outside the metropolis there could be little doubt but that the buildings to the London side of Crabtree-lane would govern the line of buildings on the other side. In this case, however, the Tribunal had to decide how far that line should extend. They had to deal with what he would call a vacant piece of land between buildings on the north and buildings on the south. In this case the Superintending Architect had taken Brandenburgh-road as one of the points, and there were reasons for doing that. In the first place, the road was not a straight one, and the general building line had to be fixed with regard to the alignment of the street, and at Brandenburgh-road there was a complete break. The first house from the break, where there was a cross road, was set back, and the Superintending Architect had taken that as one point and the houses set back on the other side of Crabtree-lane as the other point, and this, he submitted, was a right and reasonable thing to do. There was no reason whatever why the point to start the line should be taken at Crabtree-lane. The only existing buildings between Crabtree-road and the southern point at which the line was fixed were a school and four shops. The shops were erected by consent, and the school building was erected under the statutory authority of the then School Board, and therefore these buildings could not be taken into account.

The Chairman said the Tribunal had been thinking the matter over, and thought it an extreme pity that the parties did not agree. Suppose they had to find that the line went through the appellants' building, it would be a serious matter for them, and, on the other hand, if they found there was no general building line, then the appellants could build up to the pavement, which would be a great disadvantage to the whole neighbourhood.

Mr. Macmorran said the difficulty which had arisen was with regard to what the appellants should throw into the road. If they could agree to the building line which the County Council had suggested there would be no difficulty.

Mr. Munroe said that at the last sitting he made an offer, which the County Council would not accept. There was 5 ft. 6 in. of land between the front wall of the shops and the pavement, and if he was allowed half of this for his pavement lights he would give the other half to the public. As a matter of fact, if he could be reserved the rights as to the pavement lights and a sale board during business hours over the 2 ft. 6 in., he would surrender all other rights to the public, but in regard to that there appeared to be a legal difficulty.

The Chairman repeated the feeling of the Tribunal, that it was a matter on which there should be an agreement, and

Mr. Macmorran said that if the Tribunal would hear his evidence he would undertake that suggestion as to coming to terms should be laid before the Building Act Committee of the County Council.

The Chairman said they thought both parties should be reasonable. There must be a give and take on both sides, for otherwise it must be serious to one side or the other.

Mr. Herbert Alfred Legge, District Surveyor for Fulham, said the first he had to do with the matter was when Mr. Allen called on him with plans on May 4, 1911, for buildings in the road. Witness called attention to the line of frontage, and told Mr. Allen that he would have to go to the County Council to see what line he could build to. Mr. Allen argued that the line they proposed to build to was within their rights, and said that the reason why the houses to the south of Crabtree-lane had been placed back 15 ft. was because this was a residential estate, and it was by agreement with the ground landlords. He wrote on May 5 to the London County Council, stating that the appellants were taking the existing fence as their frontage line, but that most of their buildings would be behind that line. Subsequently he saw Mr. Allen on the building, and asked him if he had heard anything from the County Council as to the frontage line, and was told he had not. He received a copy of the Council's resolution on June 21, stating that they disapproved of the projecting bays, and Mr. Allen told him on June 23 or 26 that he had received a copy. At that date the building was three-parts up. Afterwards Mr. Poole, who was acting for the appellants, called on him with reference to the bay windows, and Mr. Poole told him in reply to a question that he had no instructions whatever with regard to the line of frontage.

Mr. Munroe said he submitted that, looking at the resolution passed by the County Council, only the bay windows were referred to.

Replying to the Chairman, witness said it was his duty to call the attention of the County Council to anything done not in conformity of the Building Act. He did not know that the appellants were building beyond the general line of buildings because he did not know what the general line of buildings was.

Mr. Frank S. Caton, Assistant Architect in the Building Act Section of the Superintending Architect's Department of the London County Council, said that Mr. Poole applied to the Council for consent to the buildings on May 9, 1911. The plans were placed before the Building Act Committee about a fortnight afterwards, and the Council passed a resolution on May 29. Owing to holidays and delays which occurred in presenting, the resolution was not sent out till June 20. The question of the general building line was discussed by the Committee. On June 21 Mr. Poole called on him with regard to the resolution passed, and witness suggested that Mr. Poole should advise Messrs. Allen & Norris to give up certain land and compromise. Of course, he had no authority to make that suggestion. On June 26 he had a visit from Messrs. Allen & Norris, and the question of the building line was discussed.

Mr. A. Millwood, of the Superintending Architect's Department, gave particulars as to the road, and as to the circumstances under which certain houses were erected by consent.

Mr. Walmsley, Solicitor for the Fulham Borough Council, supported the appeal, and said there was no doubt that the absence of forecourts would prejudicially affect the rateable value of the property.

Mr. F. Wood, Borough Surveyor for Fulham, disagreed with the line laid down by the Superintending Architect.

Mr. Walter Atkinson, builder, who had erected a large number of houses in the neighbourhood, said that he had built in Parfrey-road, and had left a plot of 80 ft. on which to build four houses to front Fulham Palace-road. The action of the Superintending Architect would take 15 ft. off this 80 ft.

Mr. Munroe, in replying for the appellants, said that nothing in the evidence had shaken his contention that the Superintending Architect had not defined the general line of buildings, and this was shown by the County Council having offered to agree to a different line, subject to the appellants giving up certain land. He submitted that to raise the question of the building line was only a method of putting on the screw to get land for the public. All the correspondence pointed to the fact that the parties were only dealing with the bay windows, and it was only shortly before August that the hare of the general building line was started, and his clients got notice that they had gone beyond the line after their buildings were up.

The case was further adjourned to enable the matter to be laid before the County Council.

LAW REPORTS.

KING'S BENCH DIVISION.

(Before Mr. Justice HAMILTON.)

Building Dispute :

Ramsden & Carr *v.* J. Chessum & Sons.

IN this case the plaintiffs were Messrs. Ramsden & Carr, of St. Dunstan's Studio, Seymour-place, South Kensington, and the defendants Messrs. J. Chessum & Sons, builders, of South-place, Finsbury.

During the year 1910 a cinematograph company employed Messrs. Chessum & Sons to erect "Cinema House," at 225, Oxford-street, and the plaintiffs now claimed in respect of certain goods supplied, including a quantity of artistic door handles and hammered silver and brass door plates. They alleged that the amount due to them was 142*l.* 13*s.*, which they alternatively claimed as money had and received by the defendants for the use of the plaintiffs or as money held in trust for them. Some time after the place had been opened the cinematograph company went into liquidation, and plaintiffs alleged that Messrs. Chessum & Sons had received certain payments which should be allocated to the goods supplied by the plaintiffs. This was disputed by Messrs. Chessum & Sons, who entered a general denial of liability and contended that the orders for the goods were given by the architect, but not confirmed by them.

His Lordship, in the course of a lengthy judgment, expressed the view that Messrs. Ramsden & Carr had failed to show that any money had been received to their use by the defendants. The plaintiffs succeeded on the issue as to goods sold and delivered, and obtained judgment with costs on that issue. Defendants were given the costs on the issues on which the plaintiffs failed.

Alterations to "Underhills," Bletchingley, Surrey : The Staircase Hall.
Mr. R. P. Oglesby, Architect.

OFFICIAL REFEREE'S COURT.

(Before Mr. HENRY WILLIAM VEREY.)

Battle Building Ownership Dispute: Hallett & Langdale *v.* Cowdell.

JUDGMENT was given last week in an action in which Mr. Arthur Carthew Langdale and Mr. John Hallett, trading as Langdale, Hallett, & Co., builders and decorators, of 11, West Halkin-street, Mayfair, sued Mr. Henry Seward Cowdell to recover 75*l.* 19s., balance of an account for work done at North Lodge on the Lewis-road, Battle.

The plaintiffs' case was that in October, 1910, Mr. Cowdell purchased the house in question, for which he required the alterations and additions. He approached the plaintiffs, whom he requested to prepare plans and estimates. The plaintiffs said that Mr. Cowdell had emphasised upon them the necessity for haste, desiring to have the place ready for occupation by March 25, 1911, and repeatedly he had urged that there should be no delay. Mr. Langdale had an interview with the defendant on October 25 at Southsea, taking with him the plans. This interview was regarded as important by both the parties, inasmuch as there was a direct conflict of evidence as to what took place at it. The plans were discussed, and the whole matter investigated. Mr. Langdale claimed that at that interview he was instructed to proceed with the whole of the work—the interior as well as the roof and gutters—and that it had been arranged that he was to render weekly sheets of labour with the usual 5 per cent. establishment charges and 10 per cent. profit.

The defendant, on the other hand, pleaded that plaintiffs at that interview on October 25 were instructed only to do work on the roof and gutters, and that on the day in question a verbal agreement was entered into to do the work for 40*l.* That the plaintiffs denied. —In the course of the hearing Mr. Drucquer (the defendant's counsel) said that it was a question as to whether—aye or nay—Mr. Cowdell gave the order for the whole of the work, and added that his client absolutely denied orders for the interior work. His client, too, disputed the prices for the work in respect to the roof and gutters.

In giving judgment, after hearing exhaustive evidence on both sides,

The Official Referee said he came to the conclusion that the whole conversation between Mr. Langdale and Mr. Cowdell on October 25, 1910, resulted in Mr. Langdale receiving instructions for this work to go on generally, and that consequently the plaintiffs were justified in incurring the expenditure. Mr. Langdale had stated in the witness-box that they would not have engaged a foreman at 3*l.* a week for a 40*l.* job only. This was not a case in which one or either of the parties questioned each other's veracity; there were no mutual accusations of trying to deceive. It was a matter of memory, and he (the Referee) decided that the memory of the plaintiffs was to be relied upon, Mr. Langdale having also made notes of what transpired. His Honour added he could not find anything to discredit the plaintiffs concerning their time sheets. The weather was very bad during the time the work was carried out; they had been told that there were rain, wind, snow, thunder, and lightning, that the place was exposed, and hence it was not plane-sailing work. Nor could he find that there had been any overcharges by the plaintiffs. There would, therefore, be judgment for the plaintiffs for the balance claimed—75*l.* 19s., of which 25*l.* paid into court by defendant formed a part. Plaintiffs would have High Court costs.

LONDON COUNCILS.

Barking.—The Surveyor has been directed to prepare plans and estimates for the carrying through of Bifrons-street into St. Ann's-road. The Surveyor is to prepare plans and estimates for the erection of additional cottages on the remainder of the land adjacent to King Edwards-road. The tender of Mr. S. E. Moss, Southend-on-Sea, has been accepted, at 17,344*l.*, for the erection of the Ripple Schools. A plan has been passed for Messrs. Anton Deppe Söhne for additions to factory, Hart's-lane.

Battersea.—The Borough Surveyor has been instructed to prepare estimates with a view to making-up and paving Bowood-road, Wakehurst-road, part of Alfriston-road, and part of Canford-road. The carriageway of Albert Bridge-road is to be repaired with granite macadam at an estimated cost of 434*l.* No objection is to be raised to the proposals of Messrs. Edwin Evans & Sons and Mr. W. E. Tapley to erect seven houses, Muncaster-road, and additions to Messrs. Spiers & Pond's premises, Warriner-gardens and Alexandra-avenue respectively.

Berkhamsted.—Plans submitted by the Berkhamsted Tenants, Ltd., have been approved for the erection of twelve houses.

Bushey.—Directions have been given the Surveyor to prepare plans, specifications, and provisional apportionments for making-up Nightingale-road and part of Grange-road. The tender of Messrs. Bracey & Clark, at 349*l.*, has been accepted for making-up Springfields.

Chelsea.—No objection is to be raised to a proposal by Mr. C. W. Stephens to erect a warehouse upon an island site abutting upon Pavilion-road, Charlotte-street, and Cross-street; also to the proposal of Mr. C. R. Ashbee for a building scheme at Cheyne-walk.

Croydon (County).—The tender of Messrs. W. Smith & Sons, Croydon, at 2,449*l.*, has been accepted for carrying out the work of erecting a disinfecting station in Factory-lane. The following plans have been passed:—Mr. W. Capon, Streatham, S.W., ten houses, Kilmartin-avenue; The Alliance Estates and Development Company, Ltd., 39, New Broad-street, E.C., fifty-nine houses, Beechwood-avenue, and eighteen houses, Nutfield-road; Mr. J. Hicks, Brighton-road, four houses, Mayday-road; Messrs. Thompson & Fyfe, offices, etc., Tamworth-road Model Steam Laundry; Messrs. Chown & Sheffield, Norbury, S.W., four houses, Pollard's Hill North, and two houses, Pollard's Hill West; Messrs. Paish, Tyler, & Co., 5, Station-road, West Croydon, six houses, Lower Addiscombe-road.

Croydon (Rural).—Plans and estimates have been submitted by the Surveyor for making up the following streets at Beddington, at the costs mentioned:—The Avenue, 1,086*l.*; The Grove, 710*l.*; Woodcote-grove, Approach-road, 315*l.*; Osmond-gardens, 1,083*l.*

Hackney.—An old brick sewer in a portion of Forest-road is to be reconstructed for a length of 300 ft. with 9-inch glazed stoneware pipes, at an estimated cost of 98*l.* Plans have been passed for Messrs. Douglass Mathews & Son, on behalf of Messrs. H. E. Davenport, Ltd., for a two-story addition to premises on the western side of Brunswick-place, Farleigh-road, West Hackney. Plans have been lodged with the London County Council by Messrs. Rowlandson & Co. for the erection of a factory in Chatham-place.

Hornsey.—The following plans have been passed:—Mr. W. J. Collins, pavilion, Etheldene-avenue, Crouch End; Mr. J. C. Hill, four houses, Hornsey-lane-gardens, Highgate; Messrs. Cutts, Southampton-street, W.C., alterations and additions to All Saints' Church, Durham-road, Muswell Hill.

Islington.—A further portion of the wood paving of the carriageway of Hornsey-road is to be renewed at an estimated cost of 600*l.*, as is also the asphalt carriageway of a portion of Thornhill-road at an estimated cost of 1,200*l.* In connexion with the renewal of the wood paving in Highbury-grove and, as stated above, in Hornsey-road, the tender of Thos. Gabriel & Sons has been accepted at 563*l.* 10s. 4d. to supply 86,000 creosoted yellow deal blocks.

Lambeth.—An apportionment order is to be made for paving the carriageway and footways of Denny-street. The Borough Engineer estimates the cost at 1,024*l.* No objection is to be raised to the proposal of Mr. E. B. Ellis, on behalf of Mr. H. A. Sergeant, to erect three houses at the junction of Dane-avenue with Finsen-road. The L.C.C. is to be advised to refuse the application of Mr. H. Macintosh for consent to the erection of five houses in Lyham-road.

Poplar.—Plans have been passed for Mr. Wm. Stewart, for additions to the Manor Arms beer-house, East India Dock-road; also for the London Asphalte Company, Ltd., for a factory at Leven Wharf, Leven-road.

Stepney.—The sewer in Little Hermitage-street is to be substituted with a nine-inch glazed-ware pipe sewer, at an estimated cost of 90*l.* Electricity mains are to be extended to Grafton-street, Mile End Old Town.

Wandsworth.—Tenders are to be invited for paving Daylesford-avenue, Putney, part of Roehampton-lane, Putney, and part of Southerland-grove, Southfield, as new streets. The tenders of Messrs. E. Parry & Co. have been accepted at 425*l.* (and schedule of prices for extras and omissions), and at 230*l.* (and schedule of prices for extras or omissions), for repairing Beaumont-road and part of Augustus-road, Southfield, respectively. The tender of Messrs. J. Mowlem & Co., Ltd., at 113*l.* (and schedule of prices for extras or omissions), has also been accepted for repairing Southmead-road, Southfield. Plans submitted by Mr. J. C. Radford, on behalf of Lord Westbury, for proposed sewers in two intended new streets out of the western side of Putney-hill, are to be forwarded to the London County Council for approval. The following plans have been passed:—Messrs. W. Adkins & Son, alterations and additions to Templeton, Priory-lane, Putney; alterations to Grove House, Roehampton-lane, Putney, and memorial hall, Alton-road, Putney; Messrs. Swain & Selly, twenty-two houses, Elmwood House Estate; Mr. F. Eaton, motor garage rear of No. 25, Gwendolen-avenue, Putney; Mr. A. Harvey, additions to the Convent of the Holy Family, Nos. 85, 87, and 89, Tooting High-street; Messrs. G. F. Bates & Sons, alterations and additions to Audley Lodge, Putney Park-avenue, Putney; Mr. J. W. Coates, additions to Madeira Hall, Madeira-road, Streatham; Messrs. L. & W. Whitehead & Co., Ltd., three shops, High-street, Clapham; Messrs. Allen, Fairhead, & Son, church, Narbonne-avenue, South Clapham; Messrs. Dent & Hellyer, Ltd., school for Convent of Sacred Heart, Roehampton-lane, Putney; Messrs. Holloway Brothers, twelve houses, Loxley-road, Springfield.

Watford.—Sanction has been received by the Urban District Council from the Local Government Board to the borrowing of 5,536*l.* for footpath paving.

Woolwich.—The following plans have been passed:—Mr. J. J. Bassett, 121, Earlshall-road, Eltham, eight houses, Glenlyon-road, and Dunbreck-road, Eltham; Mr. W. Pollock, West Park, Eltham, additions to east Entrance Lodge, Avery Hill, Eltham.

OBITUARY.

Mr. H. Bloomfield Bare.

We regret to record the death of Mr. H. Bloomfield Bare, which has just occurred at Liverpool. The deceased was a Fellow of the Royal Institute of British Architects, having been elected in 1888. He was a Liverpool man, and received his training in the surveyor's office of the London and North Western Railway at Liverpool. For some time he was a partner with Mr. H. L. Beckwith, architect, of Liverpool, and then, leaving England, established a practice in Philadelphia. On his return to this country about eight years ago he resumed his practice as an architect, and did considerable work in connexion with the Art Workers' Guild. Mr. Bare was a member of the Liverpool Architectural Society.

PATENTS.

APPLICATIONS PUBLISHED.*

27,446 of 1910.—Elizabeth Ann Beaumont: Appliances for dusting walls, floors, pictures, and the like.

30,075 of 1910.—Steel, Peech, and Tozer, Ltd., and Henry Edward Bowen: Magnetic lifting appliances used with cranes.

30,307 of 1910.—Wladyslaw Maciejewski: Conduits.

1 of 1911.—Walter Wille Gilbert: Grab, excavating, and the like apparatus.

4,116 of 1911.—Charles William Pinchbeck: Portable hoist.

5,319 of 1911.—Ernest Griffiths and Dargue Griffiths & Co., Ltd.: Water-heating fireplaces or stoves.

8,276 of 1911.—Frank Howard Pochin and Horace Stanley Pochin: Sandpapering and like machines.

8,429 of 1911.—Bernard Musgrave: Boiler flue baffles.

9,766 of 1911.—Christopher Whittaker: Chimney-pots and the like.

9,838 of 1911.—Alfred Zempliner: Self-closing devices for doors.

9,880 of 1911.—George Albert Ure: Slow-combustion stoves.

11,115 of 1911.—George Castle and Horatio Leonard Barraclough: Bricks, blocks, or slabs employed in building construction.

11,645 of 1911.—Paul Wilhelm Sieurin: Shovelling and hoisting material.

12,826 of 1911.—Charles Thomas Pearcy and Hubert James Vick: Windows.

14,348 of 1911.—Felix Ueberall and Albert Bussenius: Covers for the seats of water-closets.

14,706 of 1911.—Allison Riley Akin and Jacob Joseph Veid: Heating-stove.

17,580 of 1911.—Peter Storme: Tile-cutting and drilling machines.

19,221 of 1911.—Herbert James Beresford and Frank William Beresford: Water closets.

26,593 of 1911.—Joseph Francis Ebner and Edgar Ebner: Process of manufacturing blocks for wood-block flooring.

* All these applications are in the stage in which opposition to the grant of Patents upon them can be made.

List of Competitions, Contracts, etc.

For some Contracts still open, but not included in this List, see previous issues. **Those with an asterisk (*) are advertised in this number:** Competitions, iv.; Contracts, iv. vi. viii. x.; Public Appointment, xvii.; Auction Sales, xxii.

Certain conditions beyond those given in the following information are imposed in some cases, such as: the advertisers do not bind themselves to accept the lowest or any tender; that a fair wages clause shall be observed; that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

*** It must be understood that the following paragraphs are printed as news, and not as advertisements; and that while every endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur.

Competitions.

JANUARY 29. — **Montevideo.** — Government palace (premiums, 2,125*l.* and 850*l.*) and town improvement scheme (premiums, 1,060*l.*, 640*l.*, and 425*l.*). Conditions may be seen at the Board of Trade, 73, Basinghall-street, E.C.

JANUARY 31. — **Australia.** — DESIGNS FOR FEDERAL CAPITAL CITY.—The Government of the Commonwealth of Australia invite competitive designs for the laying out of this Federal capital city. See advertisement in issue of September 1 for further particulars. See also page 508, November 3.

FEBRUARY 3.—**Bolton.**—NURSES' HOME AT THE INFIRMARY.—Premiums of 30*l.*, 20*l.*, and 10*l.* Assessor, Mr. John B. Gass, F.R.I.B.A.

FEBRUARY 17.—**London, E.C.**—NEW OFFICES.—The Port of London Authority invite preliminary sketch designs for new head offices in Trinity-square, and for laying out remainder of land as a building site. See advertisement in issue of November 24 for further particulars.

FEBRUARY 17. — **York.** — SCHOOL. — The York Education Committee invite competitive designs for a public elementary school. See advertisement in issue of January 12 for further particulars.

MARCH 15. — **Drammen, Norway.**—RAILWAY-STATION.—Particulars from the Norges Statsbaner, Christiania.

MARCH 15. — **Prestatyn, North Wales.** — LAYING-OUT ESTATE.—Lord Aberconway and the Trustees of the Prestatyn Estate invite designs for laying-out of the estate. Three premiums are offered. Particulars from 33, Henrietta-street, W.C. See advertisement in issue of January 5 for further particulars.

MARCH 16. — **Harrow.** — PUBLIC OFFICES.—The Harrow-on-the-Hill U.D.C. invite tenders for the enlargement of and alterations to their Public Offices. See advertisement in issue of January 5 for further particulars.

MARCH 31. — **Winnipeg.** — NEW PARLIAMENT BUILDINGS.—The Government of Manitoba invite competitive drawings for new Parliament buildings. See advertisement in issue of January 12 and Competition News, January 5, for further particulars. Also p. 92.

MAY 1.—Society of Architects' Travelling Studentship. Design for a Town Hall. 25*l.* and medal.

JUNE 28. — **Hale, Cheshire.**—TOWN PLANNING SCHEME.—Premiums 50*l.* and 25*l.* Particulars from the Council Offices, Hale.

JULY 1. — **Dusseldorf.** — A plan for the extension of the City of Dusseldorf. Premiums of 1,000*l.* to 375*l.* Conditions on application to the Chief Burgomaster, Dusseldorf. A translation appeared on page 365, September 29.

AUGUST 30. — SAXON SNELL PRIZE. — Fifty guineas; with medal, is offered for essay on a hospital subject. Particulars from the Sanitary Institute, 90, Buckingham Palace-road, S.W.

NO DATE.—**Edinburgh.**—MEMORIAL TO KING EDWARD.—Limited.

NO DATE.—**Jordanhill, Glasgow.**—PROPOSED TRAINING COLLEGE.—Limited to six firms, named in Competition News, December 1, 1911, page 635.

Contracts.

BUILDING.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

JANUARY 26. — **Mytholmroyd.** — PAVILION. — Erection of bowling green pavilion. Plans and specifications with Messrs. Longbottom & Culpan, architects, 11, George-street, Halifax.

JANUARY 27. — **London.** — ADDITIONS, ETC.— Alterations and additions to The Cedars, Portway, West Ham. Deposit of 2*l.* 2*s.* to Colonel F. F. Johnson, C.B., Secretary, Territorial Force Association, County of Essex, Market-road, Chelmsford.

JANUARY 27.—**London.**—QUARTERS.—Erection of headquarters, Sergeant-Instructor's quarters, stores, etc., for the 7th Battalion, the Essex Regiment, and 3rd E.A. Field Ambulance, R.A.M.C., at Walthamstow. Deposit of 2*l.* 2*s.* to Colonel F. F. Johnson, C.B., Secretary, Territorial Force Association, County of Essex, Market-road, Chelmsford.

JANUARY 29.—**Farnborough.**—REPAIRS, ETC.— For painting and repairs, etc., to the Workhouse Chapel and Children's Home, Farnborough. Measurements and form of tender from the Board's Architect, Mr. Fras. J. Smith, F.R.I.B.A., Parliament-mansions, Victoria-street, S.W.

JANUARY 29. — **Lancaster.** — BUILDINGS.—For the erection of farm colony buildings. Plans seen, and quantities from the architects, Messrs. Woolfall & Eccles, FF.R.I.B.A., 60, Castle-street, Liverpool. Deposit of 1*l.* 1*s.*

JANUARY 29. — **London.** — HOUSES, ETC.—Erection of workmen's dwellings near to North-hill, Highgate; extension of workshops at sanitary depôt, High-street, Hornsey. Plans and specifications seen, and quantities and forms of tender from Mr. E. J. Lovegrove, Borough Engineer and Surveyor, Municipal Offices, Highgate, N.

JANUARY 29.—**London.**—RECONSTRUCTION.—For reconstruction of the north octagon, Temperate House, Kew Gardens. Drawings, specification, and conditions and form of contract with Mr. G. J. T. Reavell, Office of Works, etc., Storey's-gate, London, S.W.

JANUARY 29. — **Poole.**—ADDITIONS.—Erection of classroom and other additions to the Heatherlands Infants' School. Plans, specification, and general conditions with Mr. Samuel J. Newman, F.R.I.B.A., Borough Surveyor, Municipal Offices, Market-street, Poole.

JANUARY 29. — **Royston.**—HOUSE.—Erection of a house and shop, Midland-street. Plans seen, and quantities from Mr. Reginald C. Woodhead, architect and surveyor, 20, Church-street, Barnsley.

JANUARY 29.—**Thornbury.**—SCHOOL.—Erection of the new infants' school. Drawings and conditions of contract seen, and quantities and forms of tender from the City Architect, Town Hall, Bradford.

JANUARY 31.—**Chipping Ongar.**—EXTENSION.—For the extension of the needle-room at the Children's Homes at Chipping Ongar, Essex. Specification, conditions of contract, and forms of tender from Mr. Frank R. Coles, Clerk to the Guardians, Clerk's Office, Hackney Union, Homerton, N.E.

JANUARY 31. — **Christchurch, Mon.**—HOUSES, ETC.—Erection of seven houses, piggeries, and alterations to existing house and farm buildings, near the Hartridge Farm, Christchurch, near Newport, Mon. Plans and quantities, with forms of tender, from the Borough Architect, Mr. C. F. Ward, A.R.I.B.A., Town Hall. Deposit of 1*l.* 1*s.*

JANUARY 31. — **Merthyr.** — WAREHOUSE.—Erection of warehouse and saw-mill at the Great Western Railway yard. Plans and specification with Mr. T. E. Rees, architect, Bank-chambers, High-street, Merthyr.

FEBRUARY 1. — **Darlington.**—EXTENSIONS.—Extensions to the engine-house of the electric power station, Haughton-road. Plans and specification seen, and quantities from Mr. G. Winter, Borough Surveyor, Town Hall. Deposit 2*l.* 2*s.*

FEBRUARY 2.—**Rothes.**—WAREHOUSE.—Erection of a warehouse at Glenspey Distillery, for Messrs. W. & A. Gilbey, Ltd. Plans and specifications seen, and quantities from Mr. C. C. Doig, architect, Elgin.

FEBRUARY 2. — **Southwold.** — MORTUARY.—For erection of a mortuary. Plans and specification with the Borough Surveyor, Town Hall.

FEBRUARY 3.—**Bandon.**—COTTAGES.—Erection of twenty-two labourers' cottages. Plans, specifications, and tender forms from Mr. A. Haynes, Clerk to the Council.

FEBRUARY 5. — **Argoed.**—HOUSES.—Erection of eighteen houses at Argoed, for the Penylan Argoed Building Club. Plans and specifications with Mr. A. F. Webb, M.S.A., architect and surveyor, Tredegar-chambers, Blackwood.

FEBRUARY 5. — **Liverpool.**—COLONY.—Erection of epileptic colony at Maghull. Plans and specifications with Messrs. Briggs, Wolstenholme, & Thornley, FF.R.I.B.A., architects, Royal Liver Building, Pierhead, Liverpool. Quantities on deposit of 2*l.* 2*s.*

FEBRUARY 5. — **Tipton.** — CONVENIENCES, ETC.— Erection of new sanitary conveniences, etc. Drawings, specifications, and quantities by Mr. W. H. Jukes, Surveyor, Public Offices, Tipton. Deposit of 10*s.*

FEBRUARY 6. — **Blackpool.**—SCHOOL.—Erection of new Sunday-school at Victoria-street Congregational Church, Blackpool. Plans and specifications with the architect, Mr. H. Wade, 27, Birley-street, Blackpool. Quantities on deposit 1*l.* 1*s.*

FEBRUARY 6. — **Hull.** — BRIDGE.—The North-Eastern Railway invite tenders for the construction of the abutments, wing walls, and superstructure of a new bridge at Southcoates-lane. Plans seen, and specification, quantities, and form of tender from Mr. C. F Bengough, the company's engineer at York.

* FEBRUARY 7.—**London, S.W.**—EXTENSION OF POST-OFFICE.—The Commissioners of H.M. Works, etc., invite tenders for the extension of the South-Western District Post-office. See advertisement in this issue for further particulars.

* FEBRUARY 7. — **Southend-on-Sea.** — TIMBER COVERING.—The Corporation of Southend-on-Sea invite tenders for a timber covering over South Station of the Pier Tramways. See advertisement in this issue for further particulars.

FEBRUARY 8. — **London.** — ALTERATIONS.—For alterations to the needle-room block at the St. James' Infirmary. Drawings and specification and form of tender and quantities, on deposit of 1*l.*, from Mr. F. W. Piper, Clerk to the Guardians, Union Offices, St. John's-hill, Wandsworth, S.W.

FEBRUARY 9. — **Settle.** — SCHOOL.—For erection of a new secondary school. Plans seen, and specifications, with quantities, from Education Architect, County Hall, Wakefield. Deposit of 1*l.*

FEBRUARY 10. — **Newry.**—HOUSE.—For erection of a dwelling-house in Kilmorey-street. Plans, specifications, from Mr. P. J. Neary, architect, Newry.

FEBRUARY 12. — **Hastings.** — SEAT.—For construction and erection of a shelter seat on the esplanade opposite Warrior-square, St. Leonards. Drawings and specifications seen, and form of tender at the office of the Borough Engineer, Mr. P. H. Palmer, M.Inst.C.E., Town Hall, Hastings.

* FEBRUARY 13.—**Brockley.**—GREENHOUSE, ETC. —The Metropolitan Board of Deptford invite tenders for erection of a greenhouse and forcing-houses at the cemetery at Brockley-road. See advertisement in this issue for further particulars.

FEBRUARY 13. — **London.**—CONVENIENCE.—Erection of a sanitary convenience at High-street, Putney. Specification, drawings, form of contract, and particulars seen, and form of tender and quantities from the Borough Engineer and Surveyor, No. 215, Balham High-road, S.W., on deposit of 1*l.* 1*s.*

* FEBRUARY 13. — **Nuneaton.**—ENLARGEMENT OF POST-OFFICE.—The Commissioners of H.M. Works, etc., invite tenders for enlargement of Nuneaton Post-office. See advertisement in this issue for further particulars.

FEBRUARY 15.—**Birkenhead.**—TANK, ETC.—Construction of a brick gasholder tank and steel internal framing, and other works, at the new gasholder station, Laird-street. Also for the construction and erection of "A" a boundary wall, weigh-house, entrance gates, etc., at the gasholder station. Further, for the construction and erection of two cottages, a governor house, and a boiler house. Specification, general conditions of contract, and quantities at the office of the Gas Engineer, Mr. T. O. Paterson, M.Inst.C.E., Gasworks, Thomas-street, Birkenhead. A deposit of 5*l.* 5*s.* and 1*l.* 1*s.* and 2*l.* 2*s.*

* FEBRUARY 15.—**Hackney.**—BRANCH LIBRARY.— The Hackney B.C. invite tenders for erection of a Branch Library. See advertisement in this issue for further particulars.

FEBRUARY 15. — **London.** — LIBRARY.—Erection of a branch library building in Forest-road and Woodland-street, Dalston, Hackney. Plans and specifications seen, and quantities, form of tender, and contract from the architect, Mr. Edwin Cooper, F.R.I.B.A., 12, Gray's-inn-square, W.C. Deposit of 2*l.* 2*s.*

FEBRUARY 16.—**Upholland.**—SCHOOL.—Erection of an elementary school at Crawford Village, Upholland. Plans seen, and quantities at the office of the County Architect, Mr. Henry Littler, 16, Ribbledale-place, Preston. Deposit of 2*l.*

* FEBRUARY 19. — **Stratford.** — RESIDENCE AND DINNER-ROOM, ETC. — The West Ham Education Committee invite tenders for erection of new residence for caretaker and alterations at Denmark-street School; also conversion of covered playground into dinner-room, at Stock-street School. See advertisement in this issue for further particulars.

FEBRUARY 21.—**Berriew.**—SCHOOL.—Erection of a new Council school at Brooks, Berriew, and for a water supply. Plans, specifications, and conditions seen at the County Education Offices. Deposit of 1*l.* 1*s.* to Mr. Llewelyn Phillips, Clerk to the Education Authority, County Education Offices, Newtown.

FEBRUARY 23. — **Newbury.** — COTTAGES.—Erection of twelve cottages, Speenhamland. Plans and specifications with Mr. S J. L. Vincent, Borough Surveyor, Newbury.

FEBRUARY 27 — **Blackburn.**—EXTENSION.—For alteration and extension of the Town Hall. Forms of tender and specifications from the joint architects, Messrs. Briggs, Wolstenholme, & Thornley, and Messrs. Stones & Stones & Atkinson, Richmond-terrace, Blackburn, on deposit of 1*l.* 1*s.*

NO DATE. — **Halifax.**—EXTENSION.—For extension of weaving shed at Pellon. Plans with Messrs. Jackson & Fox, 7, Rawson-street, Halifax.

NO DATE.—**Heighington.**—HALL.—For erection of Heighington Church Parochial Hall. Quantities from Mr. G. Walesby Davis, M.S.A.,

BUILDING—*continued.*

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

Lic.R.I.B.A., architect, High-row-chambers, Darlington.

NO DATE.—**Hull.**—PICTURE HALL.—For erection of the East Hull Picture Drome, corner of Brazil-street. Quantities on deposit of 1*l.* 1s. to Mr. John Abbott, architect and surveyor, 18, Newland-avenue, Hull.

NO DATE. — **Lahardane.** — CHURCH.—For erection of a new church at Lahardane, Co. Mayo. Plans and specification from Messrs. William H. Byrne & Son, architects, 20, Suffolk-street, Dublin. Quantities from Messrs. D. Morris & Co., 68, Harcourt-street, Dublin.

NO DATE. — **Rochford.**—NEW HALL, ETC.—For the erection of a new dining hall, kitchen, and stores at the Workhouse, Rochford. Names to the architect, Mr. Walter J. Wood, 26, Alexandra-street, Southend-on-Sea, with a deposit of 1*l.* 1s.

NO DATE. — **Torquay.** — ALTERATIONS. — For alterations to Chelston Wesleyan Church. Mr. F. G. Moore, A.M.Inst.M.E., 9, Fleet-street, Torquay, architect.

NO DATE. — **Torquay.** — GARAGE.—Erection of garage, for the Torquay-Chelston Steam Car Company, Ltd. Mr. F. G. Moore, A.M.Inst.M.E., 9, Fleet-street, Torquay, architect.

ENGINEERING, IRON, AND STEEL.

FEBRUARY 10.—**Tunbridge Wells.**—SWITCHGEAR.—For erection of switchgear at the generating-station. Specifications and plans from Mr. J. W. Beauchamp, Borough Electrical Engineer, Stanley-road, Tunbridge Wells.

FURNITURE, PAINTING, MATERIALS, etc.

JANUARY 26. — **Brighton.** — PAINTING.—For painting the interiors of the West-street and Madeira-drive shelter halls. Specification and form of tender at the office of the Borough Surveyor, Town Hall, Brighton.

JANUARY 29. — **Birmingham.**—PAINTING.—For cleaning, painting, and colouring at the Northwood-street Public Baths. Forms of tender and specification from Mr. J. Cox, Superintendent Engineer, Kent-street, Birmingham. Deposit of 1*l.* 1s.

JANUARY 29.—**Glasgow.**—FIREBRICKS, ETC.—For supply of firebricks, fireclay, and fireclay retorts at Gasworks. Specifications and forms of tender from Mr. Alexander Wilson, Gas Engineer, 45, John-street.

JANUARY 30. — **Bradford.**—PAINTING.—For external painting at City Hospital, Leeds-road; City Hospital, Bierley Hall; Farfleet-street-dwellings, and Semon Convalescents' Home, Ilkley. Specifications and form of tender from the City Architect, Town Hall, Bradford.

JANUARY 31. — **Burnley.**—RAILING.—For fixing of iron railing and gates at Ship-alley. Plans seen, and form of tender from Mr. G. H. Pickles, M.Inst.C.E., Borough Surveyor, Town Hall.

JANUARY 31.—**Glasgow.**—STORES.—The Glasgow and South-Western Railway Company invite tenders for supply of building stone, iron castings, larch fencing, lime and Portland cement. Specifications from Mr. R. F Harrison, Stores Superintendent, Kilmarnock. Also wire fencing, and erecting same. Particulars with the company's engineer, St. Enoch Station.

JANUARY 31. — **London.** — PAINTING, ETC.—The Metropolitan Asylums Board invite tenders for cleaning and painting works at the Grove Fever Hospital, Tooting-grove, Tooting-graveney, S.W. Specification by Mr. W. T. Hatch, M.Inst.C.E., M.I.Mech.E., Engineer-in-Chief. Specification and form of tender at the office of the Board, Embankment, E.C., on deposit of 1*l.*

* FEBRUARY 1.—**Lambeth.**—REPAIRING, CLEANSING, AND REDECORATING.—The Lambeth B.C. invite tenders for repairing, cleansing, and redecorating the Mortuary and Coroner's Court, Lambeth, and the Disinfecting Station and Mortuary, Loughborough Junction. See advertisement in this issue for further particulars.

FEBRUARY 1. — **London.** — PAINTING, ETC.—For repairing, cleansing, and redecorating the Mortuary and Coroner's Court, High-street, Lambeth, and the Disinfecting Station and Mortuary, Wanless-road, Loughborough Junction. Specifications and forms of tender from Mr. Henry Edwards, C.E., Borough Engineer, Lambeth Town Hall, Brixton-hill, S.W.

FEBRUARY 3. — **Canterbury.**—MATERIALS.—For supply and delivery of materials. Forms of tender and specifications from Mr. Arthur C. Turley, A.M.Inst.C.E., City Surveyor, City Surveyor's Office, Municipal Buildings, Canterbury.

FEBRUARY 3. — **Finchley.** — DECORATIONS.—For internal decoration at the workmen's dwellings. Specification and form of tender from the Engineer and Surveyor, Mr. C. J. Jenkin, M.Inst.C.E., Council Offices, Church End, Finchley. Deposit of 1*l.*

FEBRUARY 5. — **Glasgow.** — PAINTING. — For painting Glasgow Central Station. Specifications and schedules with the company's engineer, Buchanan-street Station, Glasgow. Deposit of 2*l.* 2s.

* FEBRUARY 5.—**Hendon.**—VARIOUS MATERIALS.—The Hendon U.D.C. invite tenders for supply of certain materials and execution of works. See advertisement in this issue for further particulars.

* FEBRUARY 10. — **Stepney.** — WORKS AND MATERIALS.—The Stepney B.C. invite tenders for supply of materials and execution of works. See advertisement in this issue for further particulars.,

FEBRUARY 12. — **Halifax.** — STORES.—For the supply of stores and materials required in the Tramways Department. Forms of tender and particulars from the Tramways Engineer, Tramways Offices, Skircoat-road, Halifax.

FEBRUARY 13. — **Bournemouth.**—STORES.—For supply of tramway stores. Specification and forms of tender from Mr. I. Bulfin, General Manager, Tramways Offices, Lansdowne, Bournemouth. Deposit of 5s.

FEBRUARY 14. — **Grays.** — DECK.—The Metropolitan Asylums Board invite tenders for relaying in teak the upper deck of the training ship *Exmouth*, moored off Grays, Essex. Specification by Mr. W. T. Hatch, M.Inst.C.E., M.I.Mech.E., Engineer-in-Chief. Specification and form of tender at the office of the Board, Embankment, E.C. Deposit of 1*l.*

* FEBRUARY 14. — **Tottenham.**—DEMOLITION OF BOILER-HOUSE, ETC. — The Metropolitan Asylums Board invite tenders for the demolition of the boiler-house, chimney shaft, and other buildings at the North-Eastern Fever Hospital, Tottenham. See advertisement in this issue for further particulars.

ROADS, SANITARY AND WATER WORKS.

JANUARY 29. — **Steeton.**—PIPES, ETC.—For supplying earthenware pipes, with manholes, lamp-holes, etc. Specifications and quantities from Mr. T. Burton, Surveyor, 80, Cark-road Keighley.

* JANUARY 30. — **Ealing.**—ROAD-MAKING.—The Ealing T.C. invite tenders for making-up certain roads in the borough. See advertisement in this issue for further particulars.

FEBRUARY 1.—**Anstey.**—ROADS.—For construction of new macadam roads, with pipe sewers, etc. Plans seen, and quantities from the surveyors, Messrs. W. T. Topett & Son, 15, Hotel-street, Leicester. Deposit of 1*l.* 1s.

FEBRUARY 2. — **Barnstaple.** — SEWER.—For relaying sewer at No. 3, Lower Maudlin-street. Specification with Mr. E. Y. Saunders, P.A.S.I., Borough Surveyor, The Strand, Barnstaple.

FEBRUARY 5. — **Dowlais.** — ROADS.—For construction of roads, with drainage. Drawings and specification with Mr. W. Dowdeswell, M.S.A., architect, Treharris.

FEBRUARY 6. — **Northampton.**—GRANITE, ETC.—For supply of granite, slag, and gravel. Forms of tender and conditions from Mr Wm. Fawkes, Clerk, 4, Derngate, Northampton.

FEBRUARY 6. — **Wealdstone.** — ROAD. — For making-up of a section of Ferndale-terrace-road. Plans and specification seen, and quantities and forms of tender from Mr. H. Walker, C.E., Surveyor, Council Offices, Peel-road, Wealdstone.

FEBRUARY 7.—**Clacton.**—PIPES.—For supply of British cast-iron pipes and connexions. Specification and form of tender from the Council's consulting engineer, Mr. S. Francis, A.M.Inst.C.E., Town Hall, Clacton-on-Sea.

FEBRUARY 7.—**Scawby.**—SEWER.—For laying a sewer from Mill-place to Victoria-cottages. Plans and specifications seen, and forms of tender from Mr. Frank C. Hett, Clerk of the Council, 11, Bigby-street, Brigg.

FEBRUARY 7.—**Woolwich.**—STORES.—For supply of road material, forage, stores, etc. Forms of tender, with schedules, from Mr. J. Rush Dixon, M.Inst.C.E., Borough Engineer, Town Hall, Woolwich.

FEBRUARY 8. — **Thetford.** — DRAINAGE. — For various alterations to drainage, new outfall works, etc., at the Workhouse. Drawings and specification at the Workhouse. Specification and form of tender from Mr. S. J. Wearing, A.R.I.B.A., 15, Upper King-street, Norwich. Deposit of 10s. 6d.

FEBRUARY 12.—**London.**—MATERIALS.—The B.C. of Bethnal Green invite tenders for execution of works and supply of materials. Specifications and forms of tender from Mr. A. E. Darby, A.M.Inst.C.E., Borough Engineer and Surveyor, at the Town Hall, Cambridge-road, Bethnal Green, E.

FEBRUARY 16. — **Northwich.** — SEWAGE.—For alterations and additions to the Northwich sewage outfall works. Plans with the engineer, Mr. W. M. Beckett, A.M.Inst.C.E., 33, Brazennose-street, Manchester. Specification, quantities, and form of tender on deposit of 3*l.* 3s.

Public Appointment.

Nature of Appointment.	By whom Advertised.	Salary.	Application to be in
*JUNIOR DRAUGHTSMAN	Derbyshire Education Com.	100*l.* per annum	Feb. 3

Auction Sales.

Nature and Place of Sale.	By whom Offered.	Date of Sale.
*BUILDER'S STOCK AND PLANT, GT. ORMOND-ST., W.C.—Ormond-yard, W.C.	H. W. Smith	Feb. 1
*LEASEHOLD PREMISES, CHELSEA—At the Mart	Furbers	Feb. 7

SOME RECENT SALES OF PROPERTY:

ESTATE EXCHANGE REPORT.

January 5.—By CRANSWICK & CRANSWICK.

Bempton, Yorks.—White Horse Inn, f.	£1,000
Arable and pasture land, 34 acres, f.	1,690

January 15.—By MORGAN, BAINES, & CLARK.

Sutton.—Grange-rd., St. Margarets, f., y.r. 90*l.*	1,100
Wallington.—Grosvenor-av., Melita House, f., y.r. 45*l.*	675
The Hut, f., y.r. 32*l.* 10s.	445

By J. TYDEMAN.

Cheshunt, Herts.—Bull's Head p.h. and 2 acres, f., y.r. 100*l.*	2,050
Two cottages and meadow land, f., w.r. 27*l.* 8s.	365
156, Crossbrook-st., f., p.	255

January 16.—By J. J. HILL & WEAVER.

Barbican.—Beech-st., George and Dragon p.h., lease for 36 yrs. at 120*l.* with possession	100

January 18.—By ARBER, RUTTER, WAGHORN, & BROWN.

Regent-st.—11 and 12, Argyll-pl., area 1,400 ft., f., g.r. 525*l.*	9,000

By C. C. & T. MOORE.

Aldgate.—28, High-st. (s.), f., y.r. 23*l.* 5s.	£3,500
32 and 34, Scarborough-st., f., y.r. 72*l.*	860
Mile End.—199, Jubilee-st. (s.), u.t. 17¼ yrs., g.r. 6*l.* 10s., w.r. 52*l.*	105
Southwark.—117, Southwark Bridge-rd., f., p.	300
Hammersmith.—99 and 101, Queen-st., f., p.	225
Clerkenwell.—34, Clerkenwell-green, f., p.	500

By C. ERNEST MANEY.

Clapham.—71, Deauville-rd., u.t. 80½ yrs., g.r. 9*l.*, e.r. 45*l.*	350
New Wandsworth.—96, Manchuria-rd., u.t. 90 yrs., g.r. 7*l.* 10s., y.r. 32*l.*	325
Brixton.—16 and 18, Branksome-rd., u.t. 55 yrs., g.r. 10*l.*, w.r. 83*l.* 4s.	275

By LINNETT, LANE, & BETTRIDGE.

Harlesden.—79, Tubbs-rd., u.t. 70 yrs., g.r. 5*l.* 10s., w.r. 41*l.* 12s.	230
33, Buckingham-rd., u.t. 69 yrs., g.r. 5*l.*, w.r. 31*l.* 4s.	195
45 and 47, Westbury-rd., u.t. 84 yrs., g.r. 10*l.*, w.r. 52*l.*	165
Wandsworth.—96 and 102, Standen-rd., f., w.r. 54*l.* 12s.	440
Camberwell.—32, Foreign-st., u.t. 53 yrs., g.r. 4*l.* 10s., w.r. 41*l.* 12s.	£210

By H. HOOKEY & Co.

Balham.—58, Balham High-rd. (picture palace), beneficial lease for 3¼ yrs. at 130*l.*, with possession	100

By Geo. BILLINGS, WRIGHT, & Co.

Hackney.—25, London-rd., u.t. 42 yrs., g.r. 5*l.*, e.r. 28*l.*	155
Poplar.—32, Cotton-st. (s.), f., w.r. 36*l.* 8s.	210
15, Bow-la., f., w.r. 28*l.* 12s.	180

***Contractions used in these lists.*—F.g.r.** for freehold ground-rent; l.g.r. for leasehold ground-rent; i.g.r. for improved ground-rent; g.r. for ground-rent; r. for rent: f. for freehold; c. for copyhold; l. for leasehold; p. for possession; e.r. for estimated rental; w.r. for weekly rental; q.r. for quarterly rental; y.r. for yearly rental: u.t. for unexpired term; p.a. for per annum; yrs. for years; la. for lane; st. for street; rd. for road; sq. for square; pl. for place; ter. for terrace; cres. for crescent; av. for avenue; gdns. for gardens; yd. for yard; gr. for grove; b.h. for beerhouse; p.h. for public-house; o. for offices; s. for shops; ct. for court.

PRICES CURRENT OF MATERIALS.

*** Our aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information.

BRICKS, &c.

Per 1000 Alongside, in River.	£ s. d.
Best Stocks	1 14 0
Picked Stocks for Facings	2 7 0

Per 1000, Delivered at Railway Depôt.	£ s. d.		£ s. d.
Flettons	1 12 0	Best Blue Pressed Staffordshire	3 15 0
Best Fareham Red	3 12 0	Do. Bullnose	4 0 0
Best Red Pressed Bunbon Facing	5 0 0	Best Stourbridge Fire Bricks	4 0 0
GLAZED BRICKS—			
Best White, Ivory, and Salt Glzd.Str'tch'rs	11 7 6	Double Headers	13 17 6
Headers	10 17 6	One Side and two Ends	17 17 6
Quoins, Bullnose, and ¼ in. Flats	14 17 6	Two Sides and one End	18 17 6
D'ble Stretchers	16 17 6	Splays & Squints	16 7 6

Second Quality £1 10s. per 1000 less than best.

	s. d.	
Thames and Pit Sand	6 9	per yard, delivered.
Thames Ballast	5 6	" "
Best Portland Cement	31 0	per ton, "
Best Ground Blue Lias Lime	19 0	" "

NOTE—The cement or lime is exclusive of the ordinary charge for sacks.

Grey Stone Lime ..... 13s. 0d. per yard delivered.
Stourbridge Fireclay in sacks 27s. 0d. per ton at rly dpt.

STONE.

Per Ft. Cube.

	s. d.
BATH STONE—delivered on road waggons, Paddington Depôt	1 6½
Do. do. delivered on road waggons, Nine Elms Depôt	1 8½
PORTLAND STONE (20 ft. average)—	
Brown Whitbed, delivered on road waggons, Paddington Depôt, Nine Elms Depôt, or Pimlico Wharf	2 3
White Basebed, delivered on road waggons Paddington Depôt, Nine Elms Depôt, or Pimlico Wharf	2 4½

Per Ft. Cube, delivered at Railway Depôt.

	s. d.		s. d.
Ancaster in blocks	1 10	Closeburn Red Freestone	2 0
Beer in blocks	1 6	Red Mansfield Freestone	2 4
Greenshill in blocks	1 10	Talacre & Gwespyr Stone	2 8
Darley Dale in blocks	2 4		
Red Corsehill in blocks	2 3		

YORK STONE—*Robin Hood Quality.*

Per Ft. Cube, Delivered at Railway Depôt.	s. d.
Scappled random blocks	2 10

Per Ft. Super., Delivered at Railway Depôt.

6 in. sawn two sides landings to sizes (under 90 ft. super.)	2 3
6 in. rubbed two sides ditto, ditto	2 6
3 in. sawn two sides slabs (random sizes)	0 11½
2 in. to 2½ in. sawn one side slabs (random sizes)	0 7
1¼ in. to 2 in. ditto, ditto	0 6

HARD YORK—

Per Ft. Cube, Delivered at Railway Depôt.	
Scappled random blocks	3 0

Per Ft. Super., Delivered at Railway Depôt.

6 in. sawn two sides landing to sizes (under 40 ft. super.)	2 8
6 in. rubbed two sides ditto	3 0
3 in. sawn two sides slabs (random sizes)	1 2
2 in. self-faced random flags	0 5

SLATES.

Per 1000 of 1200 at Railway Depôt.

In. In.	£ s. d.	In. In.	£ s. d.
20×10 best blue Bangor	13 2 6	20×10 best Eur'ka unfading green	15 17 6
20×12 ditto	13 17 6	20×12 ditto	18 7 6
20×10 1st quality ditto	13 0 0	18×10 ditto	13 5 0
20×12 ditto	13 15 0	16×8 ditto	10 5 0
16×8 ditto	7 5 0	20×10 permanent green	11 12 6
22×10 best blue Portmadoc	12 12 6	18×10 ditto	9 12 6
16×8 ditto	6 12 6	16×8 ditto	6 12 6

TILES.

At Railway Depôt.

	s. d.		s. d.
Best plain red roofing (per 1000)	42 0	Best "Hartshill" brand, plain sand-faced (per 1000)	50 0
Hip and Valley (per doz.)	3 7	Do. pressed (per 1000)	47 6
Best Broseley (per 1000)	50 0	Do. Ornamental (per 1000)	50 0
Do. Ornamental (per 1000)	52 6	Hip (per doz.)	4 0
Hip and Valley (per doz.)	4 0	Valley (per doz.)	3 6
Best Ruabon red, brown, or brindled		Staffords. (Hanley) Reds or Brindled (per 1000)	42 6
(Edw'ds) (per 1000)	57 6	Hand-made sand-faced (per 1000)	45 0
Do. Ornamental (per 1000)	60 0	Hip (per doz.)	4 0
Hip (per doz.)	4 0	Valley (per doz.)	3 6
Valley (per doz.)	3 0		

WOOD.

BUILDING WOOD.	At per standard. £ s. d.	£ s. d.
Deals: best 3 in. by 11 in. and 4 in. by 9 in. and 11 in.	14 0 0 ...	15 10 0
Deals: best 3 by 9	13 10 0 ...	14 10 0

WOOD (*Continued*).

JOINERS' WOOD.	At per standard. £ s. d.	£ s. d.
Battens: best 2½ in. by 7 in. and 8in., and 3 in. by 7 in. and 8 in.	11 10 0 ...	12 10 0
Battens: best 2½ by 6 and 3 by 6	0 10 0	less than 7 in. and 8 in.
Deals: seconds	1 0 0	less thn best.
Battens: seconds	0 10 0	" "
2 in. by in. and 2 in. by 6 in.	9 10 0 ...	10 10 0
2 in. by 4½ in. and 2 in. by 5 in.	9 0 0 ...	10 0 0
Foreign Sawn Boards— 1 in. and 1¼ in. by 7 in.	0 10 0	more than battens.
¼ in.	1 0 0	"
Fir timber: best middling Danzig or Memel (average specification)	At per load of 50 ft. 5 0 0 ...	5 10 0
Seconds	4 10 0 ...	5 0 0
Small timber (8 in. to 10 in.)	3 17 6 ...	4 0 0
Small timber (6 in. to 8 in.)	3 5 0 ...	3 10 0
Swedish balks	2 12 6 ...	3 0 0
Pitch-pine timber (30 ft. average)	5 5 0 ...	6 0 0
White Sea: first yellow deals,	At per standard.	
3 in. by 11 in.	24 10 0 ...	25 10 0
3 in. by 9 in.	22 10 0 ...	23 10 0
Battens, 2½ in. and 3 in. by 7 in.	17 0 0 ...	18 0 0
Second yellow deals, 3in. by 11in.	19 0 0 ...	20 0 0
" " 3 in. by 9 in.	18 0 0 ...	19 10 0
Battens, 2½ in. and 3in. by 7 in.	14 0 0 ...	15 0 0
Third yellow deals, 3 in. by 11 in. and 9 in.	14 0 0 ...	15 0 0
Battens, 2½ in. and 3 in. by 7 in.	11 10 0 ...	12 10 0
Petersburg: first yellow deals, 3 in. by 11 in.	21 10 0 ...	22 10 0
Do. 3 in. by 9 in.	18 10 0 ...	19 10 0
Battens	14 0 0 ...	15 0 0
Second yellow deals, 3 in. by 11 in	16 10 0 ...	17 10 0
Do. 3 in. by 9 in.	15 0 0 ...	16 0 0
Battens	11 10 0 ...	12 10 0
Third yellow deals, 3in. by 11 in.	13 10 0 ...	14 10 0
Do. 3 in. by 9 in.	13 0 0 ...	14 0 0
Battens	10 10 0 ...	11 0 0
White Sea and Petersburg— First white deals, 3 in. by 11 in.	15 0 0 ...	16 0 0
" " 3 in. by 9 in.	14 0 0 ...	14 10 0
Battens	11 10 0 ...	12 10 0
Second white deals, 3in. by 11in.	14 0 0 ...	15 0 0
" " 3 in. by 9 in.	13 0 0 ...	14 0 0
Battens	10 10 0 ...	11 0 0
Pitch-pine: deals	19 0 0 ...	21 0 0
Under 2 in. thick extra	0 10 0 ...	1 0 0
Yellow Pine—First, regular sizes	44 0 0	upwards.
Oddments	32 0 0	"
Seconds, regular sizes	33 0 0	"
Oddments	28 0 0	"
Kurai Pine—Planks per ft. cube.	0 3 6 ...	0 5 0
Danzig and Stettin Oak Logs— Large, per ft. cube	0 3 0 ...	0 3 9
Small " "	0 2 6 ...	0 2 6
Wainscot Oak Logs, per ft. cube	0 5 6 ...	0 6 0
Dry Wainscot Oak, per ft. sup. as inch	0 0 9 ...	0 0 11
¼ in. do. do.	0 0 8 ...	—
Dry Mahogany—Houndras, Tabasco, per ft. super. as inch	0 0 10 ...	0 1 1
Selected, Figury, per ft. super. as inch	0 1 6 ...	0 2 6
Dry Walnut, American, per ft. super. as inch	0 0 10 ...	0 1 0
Teak, per load	18 0 0 ...	22 0 0
American Whitewood planks, per ft. cube	0 4 0 ...	0 5 0
Prepared Flooring, etc.—	Per square.	
1 in. by 7 in. yellow, planed and shot	0 13 6 ...	0 17 0
1 in. by 7 in. yellow, planed and matched	0 14 0 ...	0 18 0
1¼ in. by 7 in. yellow, planed and matched	0 16 0 ...	1 0 0
1 in. by 7 in. white, planed and shot	0 12 0 ...	0 14 6
1 in. by 7 in. white, planed and matched	0 12 6 ...	0 15 0
1¼ in. by 7 in. white, planed and matched	0 15 0 ...	0 16 6
¾ in. by 7 in. yellow, matched and beaded or V-jointed brds.	0 11 0 ...	0 13 6
1 in. by 7 in. " "	0 14 0 ...	0 18 6
¾ in. by 7 in. white " "	0 10 0 ...	0 11 0
1 in. by 7 in. " "	0 12 9 ...	0 15 0

6 in. at 6d. to 9d. per square less than 7 in.

JOISTS, GIRDERS, &c.

	In London, or delivered Railway Vans, £ s. d.	£ s. d. per ton.
Rolled Steel Joists, ordinary sections	7 10 0 ...	8 0 0
Compound Girders, ordinary sections	9 10 0 ...	10 0 0
Steel Compound Stanchions	11 0 0 ...	12 0 0
Angles, Tees, and Channels, ordinary sections	9 10 0 ...	10 0 0
Flitch Plates	9 10 0 ...	9 10 0
Cast Iron Columns & Stanchions, including ordinary patterns	7 10 0 ...	8 10 0

METALS.

	Per ton, in London. £ s. d.	£ s. d.
IRON— Common Bars	9 0 0 ...	9 10 0
Staffordshire Crown Bars, good merchant quality	9 5 0 ...	9 15 0
Staffordshire "Marked Bars"	11 0 0 ...	—
Mild Steel Bars	9 5 0 ...	9 15 0
Hoop Iron, basis price	10 0 0 ...	—
" " Galvanised	17 10 0 ...	—
(*And upwards, according to size and gauge.)		
Sheet Iron Black— Ordinary sizes to 20 g.	10 5 0 ...	—
" " 24 g.	11 5 0 ...	—
" " 26 g.	12 15 0 ...	—
Sheet Iron, Galvanised, flat, ordinary quality— Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	15 10 0 ...	—
Ordinary sizes to 22 g. and 24 g.	16 0 0 ...	—
" " 26 g.	17 0 0 ...	—
Sheet Iron, Galvanised, flat, best quality— Ordinary sizes to 20 g.	18 10 0 ...	—
" " 22 g. and 24 g.	19 0 0 ...	—
" " 26 g.	20 10 0 ...	—

METALS (*Continued*).

IRON (*Continued*)—	Per ton, in London. £ s. d.	£ s. d.
Galvanised Corrugated Sheets— Ordinary sizes, 6ft. to 8ft. 20 g.	15 0 0 ...	—
" " 22 g. and 24 g.	15 5 0 ...	—
" " 26 g.	16 15 0 ...	—
Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker	12 10 0 ...	—
Best Soft Steel Sheets, 2 g. & 24 g.	13 10 0 ...	—
" " " 26 g.	15 10 0 ...	—
Cut Nails, 3 in. to 6 in.	11 0 0 ...	11 17 0

(Under 3 in., usual trade extras.)

LEAD, &c.

	£ s. d.	
LEAD—Sheet, English, 4lb. and up	19 10 0 ...	—
Pipe in coils	20 0 0 ...	—
Soil pipe	23 0 0 ...	—
Compo pipe	23 0 0 ...	—
ZINC—Sheet—	In casks of 10 cwt.	
Vielle Montagne	33 10 0 ...	—
Silesian	33 5 0 ...	—
Zinc, in bundles, 1s. per cwt. extra.		
COPPER— Strong Sheet per lb.	0 1 0 ...	—
Thin " "	0 1 1 ...	—
Copper nails "	0 0 10 ...	—
Copper wire "	0 0 10 ...	—
BRASS— Strong Sheet "	0 0 11 ...	—
Thin "	0 1 0 ...	—
TIN—English Ingots "	0 2 0 ...	—
SOLDER—Plumbers' "	0 0 8½ ...	—
Tinmen's "	0 0 11 ...	—
Blowpipe "	0 1 2 ...	—

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES.*

Per Ft., Delivered.

15 oz. thirds	2½d.	26 oz. fourths	3½d.
" fourths	1½d.	32 oz. thirds	5d.
21 oz. thirds	3d.	" fourths	4½d.
" fourths	2½d.	Fluted Sheet, 15 oz.	3½d.
26 oz. thirds	4d.	" 21 oz.	4½d.

ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.*

Per Ft., Delivered.

⅛ Hartley's	2d.	Figured Rolled, Oxford Rolled, Oceanic, Arctic, Muffled, and Rolled Cathedral, white	3½d.
3/16 "	2½d.		
¼ "	2½d.	Ditto, tinted	5d.

* Not less than three crates.

OILS, &c.

		£ s. d.
Raw Linseed Oil in pipes	per gallon	0 3 6
" " " in barrels	"	0 3 7
" " " in drums	"	0 3 9
Boiled " " in barrels	"	0 3 9
" " " in drums	"	0 4 0
Turpentine in barrels	"	0 3 0
" in drums	"	0 3 2
Genuine Ground English White Lead, per ton		26 10 0
Red Lead, Dry	"	23 5 0
Best Linseed Oil Putty	per cwt.	0 10 0
Stockholm Tar	per barrel	1 12 0

VARNISHES, &c.

	Per gallon. £ s. d.
Fine Pale Oak Varnish	0 8 0
Pale Copal Oak	0 10 6
Superfine Pale Elastic Oak	0 12 6
Fine Extra Hard Church Oak	0 10 0
Superfine Hard-drying Oak, for seats of Churches	0 14 6
Fine Elastic Carriage	0 12 0
Superfine Pale Elastic Carriage	0 16 0
Fine Pale Maple	0 10 0
Finest Pale Durable Copal	0 18 0
Extra Pale French Oil	1 1 0
Eggshell Flating Varnish	0 18 0
White Pale Enamel	1 4 0
Extra Pale Paper	0 12 0
Best Japan Gold Size	0 10 6
Best Black Japan	0 16 0
Oak and Mahogany Stain	0 9 0
Brunswick Black	0 8 0
Berlin Black	0 16 0
Knotting	0 10 9
French and Brush Polish	0 10 6

TO CORRESPONDENTS.

NOTE.—All communications with respect to literary and artistic matters should be addressed to "THE EDITOR" (and not to any person by name); those relating to advertisements and other exclusively business matters should be addressed to "THE PUBLISHER," and *not* to the Editor.

All communications must be authenticated by the name and address of the sender, whether for publication or not. No notice can be taken of anonymous communications.

The responsibility of signed articles, letters, and papers read at meetings rests, of course, with the authors.

We cannot undertake to return rejected communications; and the Editor cannot be responsible for drawings, photographs, manuscripts, or other documents, or for models or samples sent to or left at this office, unless he has specially asked for them.

All drawings sent to or left at this office for consideration should bear the owner's name and address on either the face or back of the drawing. Delay and inconvenience may result from inattention to this.

Any commission to a contributor to write an article, or to execute or lend a drawing for publication, is given subject to the approval of the article or drawing, when received, by the Editor, who retains the right to reject it if unsatisfactory. The receipt by the author of a proof of an article in type does not necessarily imply its acceptance.

N.B.—Illustrations of the First Premiated Design in any important architectural competition will always be accepted for publication by the Editor, whether they have been formally asked for or not.

TENDERS.

Communications for insertion under this heading should be addressed to "The Editor," and must reach us *not later than* 10 *a.m. on Thursday.* [N.B.—We cannot publish Tenders unless authenticated either by the architect or the building owner; and we cannot publish announcements of Tenders accepted unless the amount of the Tender is stated, nor any list in which the lowest Tender is under 100*l.* unless in some exceptional cases and for special reasons.]

* Denotes *accepted.* † Denotes *provisionally accepted.*

ABERAVON.—For construction of a brick well, boiler-shed, etc., at the rear of the slaughter-house. Mr. J. Roderick, Borough Surveyor. Quantities by Surveyor :—

Barnes, Chaplin, & Co.	£206 5	L. George	£188 8
C. Sayers	205 0	A. Scott, Port Talbot*	150 0

BEXLEY WELLING.—For proposed new infants' school, for the Kent Education Committee. Mr. Wilfrid H. Robinson, M.S.A., architect :—

L. Lown & Co.	£3,820 0 0	A. S. Ingleton	£3,288 10 0
E. Proctor & Son	3,760 0 0	C. H. Hunt & Son	3,177 12 11
E. J. Garlick	3,720 0 0	Friday & Ling	3,175 0 0
Fassnidge & Son	3,660 0 0	R. A. Lowe & Co.	3,147 0 0
Mussellwhite & Sapp	3,618 0 0	Ellis Bros.	3,144 0 0
C. E. Skinner	3,550 0 0	F. & G. Foster	2,994 0 0
Milton Bros.	3,500 0 0	L. Kazak, Belvedere‡	2,912 0 0
W. F. Blay, Ltd.	3,300 0 0		
G. E. Wallis & Sons, Ltd.	3,289 0 0		

‡ Recommended for acceptance.

COULSDON.—For making up Red Down-road. Mr. R. M. Chart, F.S.I., Council Surveyor, Croydon :—

W. Hall	£1,088	E. Yewen	£933
Free & Sons	1,038	E. Iles, Mitcham and Leigh, Surrey*	889
E. Streeter	1,014		

[Surveyor's estimate, £986.]

EPWORTH.—For alterations and additions at the Council school, for the Lindsey Education Committee. Messrs. Scorer & Gamble, architects, Lincoln. Quantities by architects :—

A. E. Backhouse	£885 15 0	H. Trimmingham	£573 7 6
F. Horton	677 7 4	B. Pumfrey	566 5 0
F. Waite	620 0 0	H. Kelsey, jun.	563 14 0
Stanley Bros.	608 6 11	Moody Bros.	563 3 6
W. H. Smith & Son	590 8 8	S. Lawrence, Thorne*	495 17 6½
T. E. Thompson	585 10 0		
S. R. & T. Kelsey	577 0 0		

HADDENHAM.—For erection of a new elementary school and special subjects centre, for the Bucks County Education Committee. Mr. C. H. Riley, Architect, Education Office, Aylesbury. Quantities by Messrs. W. T. Farthing & Son, Strand, W.C. :—

Hyde & Merrick	£3,562 9 11	G. H. Gibson & Sons	£2,688 0 0
J. Mead	2,946 17 6	G. Biggs & Sons	2,666 0 0
H. W. Ricketts	2,900 19 8	J. T. Harris	2,577 0 0
H. J. & A. Wright	2,840 0 0	Webster & Cannon	2,498 0 0
C. H. Hunt & Son	2,787 0 0	Crook & Judd, Waddesdon*	2,364 4 0
B. Holland	2,750 0 0		
A. E. & C. Saw	2,744 17 0		

LONDON.—For erection of a house for the First Assistant Medical Officer at Long-grove Asylum, for the London County Council :—

G. Potter	£1,145	Cropley Bros.	£1,040
G. Parker & Sons	1,072	J. Carmichael	1,014
F. Potter	1,067	Roll & Taylor	939

LONDON.—For erection of four triple expansion vertical engines, two surface condensing plants with air and circulating pump, at the Crossness pumping station, for the London County Council :—

	1st Tender. £	2nd Tender. £
Gwynnes, Ltd.	—	{12,452 / 13,187
Browett, Lindley, & Co., Ltd.	{9,600 / 10,200}	10,900
M. Paul & Co., Ltd.	10,500	10,300
Bellis & Morcom, Ltd.	10,876	10,248
J. Howden & Co., Ltd.	9,760	9,996
Fullerton, Hodgart, & Barclay, Ltd.	9,750	9,500

YEOVIL.—For Yeovil Housing Scheme. Messrs. Petter & Warren, architects, Yeovil :—

—	Group 1. £ s. d.	Group 2. £ d.	Group 3. £ s. d.	Total. £ s. d.
J. Francis	9,866 0 0	10,358 0 0	10,358 0 0	30,588 0 0
Pollard & Son	9,862 10 0	9,854 0 0	9,838 0 0	29,554 10 0
Pollard & Co.	9,508 0 0	9,966 0 0	9,957 0 0	29,431 0 0
Wort & Way	9,185 11 7	8,980 10 9	8,975 7 0	27,141 9 4
Coles Bros.	8,827 0 0	9,094 0 0	9,097 0 0	27,018 0 0
Stockham	8,991 0 0	8,867 10 0	8,843 0 0	26,701 10 0
Steer & Pearce	8,704 0 0	8,748 0 0	8,748 0 0	26,200 0 0
Parsons Bros.	8,595 0 0	8,495 0 0	8,485 0 0	25,575 0 0
Hillard Bros.	8,622 10 0	8,398 0 0	8,507 10 0	25,528 0 0
Wakeham Bros.	8,636 0 0	8,459 0 0	8,430 0 0	25,525 0 0
Bryer	7,555 0 0	8,785 0 0	8,685 0 0	25,025 0 0
Ivemy	8,233 10 0	8,088 0 0	7,985 0 0	24,304 10 0
Childs	8,051 8 6	7,745 19 11	7,810 14 5	23,608 2 10
Chamberlain	7,364 0 0	7,196 0 0	7,328 0 0	21,888 0 0
Pittard & Son	7,192 0 0	7,340 0 0	7,340 0 0	21,872 0 0
Mogridge & Son‡	6,848 0 0	6,817 0 0	6,813 0 0	20,478 0 0
A. J. Colborne	6,892 11 0	6,875 16 0	6,595 0 0	20,367 7 0

‡ Tender for Group 1 provisionally accepted.

LONDON.—For supply of electric lighting materials at tramway buildings, for the London County Council :—

General Electric Co., Ltd	£260 10 1‡
Pinching & Walton	254 2 0‡
Edison & Swan United Electric Light Co., Ltd	251 16 6‡
Armorduct Manufacturing Co., Ltd., Farringdon-avenue, E.C.*	249 8 7‡

‡ Less 2½ per cent. discount.

[The estimate of the Chief Officer of Tramways, comparable with the tenders, was £320.]

LOOSE.—For Council school, for the Kent Education Committee. Mr. Wilfrid H. Robinson, M.S.A., architect :—

R. Gibbons & Son	£5,206 15 7
Mussellwhite & Sapp	5,085 0 0
Cox Bros.	4,997 0 0
Barden & Head	4,894 0 0
Martin & Newman	4,865 0 0
A. S. Ingleton	4,840 10 0
D. Goddon & Son	4,716 0 0
I. A. Davison	4,713 0 0
J. Wood & Son	4,712 0 0
G. E. Wallis & Sons, Ltd.	4,664 0 0
C. E. Skinner	4,551 0 0
Ellis Bros.	4,530 0 0
G. H. Hunt & Son	4,515 0 0
W. T. Burrows	4,331 0 0
G. Bowes & Son	4,312 10 0
Clarke & Epps, Maidstone‡	4,296 0 0

‡ Recommended for acceptance.

YEOVIL, MONTACUTE.—For Montacute Housing Scheme. Messrs. Petter & Warren, architects, Yeovil :—

	Houses.	Stone Wall.
Pittard & Son	£2,041 0	£96 0
Walbridge & Son	1,995 0	118 2
T. Stockham	1,960 0	175 0
Yandle & Son	1,850 0	100 0
Childs Bros.	1,807 0	150 0
Gleed Bros.	1,800 0	139 10
J. Francis*	1,534 0	85 0

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